

## CHAPTER 6 MEASURES TO AVOID OR MINIMIZE EFFECTS

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*The Washington State Department of Transportation (WSDOT) proposes the following measures to avoid or minimize effects to human health and the environment during construction and implementation of the Bellevue to Lynnwood Improvement Project.*

### ***What measures will be taken to avoid or minimize construction effects?***

#### **Traffic and Transportation**

- WSDOT will coordinate with the local agencies and other projects to prepare a Traffic Management Plan prior to making any changes to the traffic flow or lane closures. Local agencies, the public, school districts, emergency service providers, and transit agencies will be informed of the changes in advance through the media, the website, and an email listserv. Pedestrian and bicycle circulation will be maintained as much as possible during construction.
- Traffic management strategies in the Bellevue to Lynnwood Improvement project area will be implemented prior to construction to increase public awareness and participation in HOV travel. The major focus will be on expanding vanpooling and vanshare opportunities.

#### **Noise**

WSDOT can control noise at three locations: 1) at noise sources (with mufflers and quieter engines); 2) along noise paths (with barriers); and 3) at receptors (with insulation). Noise abatement is only necessary where frequent human use occurs and where a lower noise level will provide benefits (FHWA 1982). The following mitigation measures are proposed as potential measures to control noise as a result of construction activities:

- As construction takes place in the area where the noise barrier is to be built, if possible, construct the proposed noise barrier before other construction activities begin;
- Limit the noisiest construction activities (for example, pile driving) to between 7 AM and 10 PM to reduce construction noise levels during sensitive nighttime hours;

- Use quiet equipment by equipping construction equipment engines with adequate mufflers, intake silencers, and engine enclosures to reduce their noise;
- Minimize operation time by turning off construction equipment during prolonged periods of nonuse to eliminate noise;
- Where possible, locate stationary equipment away from sensitive receptors such as residences to decrease noise;
- Construct temporary noise barriers or curtains around stationary equipment that must be located close to residences, to decrease noise levels at nearby sensitive receptors; and
- Require the use of Occupational Safety and Health Administration (OSHA)-approved ambient sound-sensing backup alarms to reduce disturbances from backup alarms during quieter periods.

#### **Recreational, Cultural and Historical Resources**

##### *Measures to avoid or minimize harm to the Section 4(f) resources*

The I-405 Team did not identify minimization efforts for the Build Alternatives because no Section 4(f) resources will be affected. While the Sammamish River Trail is considered a transportation facility where it crosses the I-405 right of way and is not protected under Section 4(f), WSDOT proposes to maintain an operational trail during construction by constructing that portion of the outfall that directly impacts the trail during two night-time closures of the trail. The trail will be reopened for day-time use following each closure, and the trail will remain open during the construction of the remaining outfall project and water quality pond. As needed, the construction site will be cordoned off with high-visibility fencing and trail traffic will be controlled by a flagger. At the conclusion of the construction, the trail and all disturbed areas will be fully restored to their pre-construction condition.

##### *Measures to avoid or minimize harm to cultural resources*

Prior to construction, an Unanticipated Discovery Plan (UDP) will be developed that will guide procedures should archaeological materials or human remains be discovered during construction.

## Communities, Businesses, and Services

### *Service Providers*

Construction traffic effects were the most common concerns expressed during the service provider interviews. We will minimize traffic effects by limiting closures to nights and weekends when possible. WSDOT will make available a Transportation Management Plan during construction. WSDOT will not implement all of the mitigation recommendations from the service provider interviews because many do not mitigate a specific project effect. The service providers identified communication as a key way to minimize construction and express toll lane effects on the public and minority and low-income population. We will implement the following communication techniques during project construction:

- Inform local agencies, the public, school districts, emergency service providers, and transit agencies of traffic changes ahead of time, including how to use and access express toll lanes.
- Send information to service provider contacts so that they can include the information in newsletters and relay the information face to face. We will accomplish this in part by sending service providers the project's monthly electronic newsletter.
- Send flyers and handouts to service providers for posting and distributing in key locations at their facilities. We will provide flyers in Spanish, Chinese, Russian, and Vietnamese using accurate and concise translations.
- Post flyers at key locations, such as community centers and churches.
- Set up a project table and talk with people at locations such as food banks.

### *Business Access*

- As part of construction management, WSDOT will prepare access maintenance measures that will be included in the construction contract specifications.
- Because it may be difficult to determine whether a business is open, or how to access a business during the construction period, WSDOT will make provisions for

posting appropriate signs that communicate the necessary access information to potential customers.

- Through careful planning and efficient construction staging, WSDOT may be able to reduce potential access restrictions associated with delivery and storage of construction equipment and materials. For example, WSDOT may schedule these activities for off-peak travel and business hours to minimize the construction effect on surrounding properties.
- WSDOT will keep daytime street closures to a minimum to provide access for businesses during regular business hours.

### *Displacements*

No residences or businesses will be displaced by the project. No new right of way is required for this project.

### *Utilities*

- WSDOT will notify and coordinate with fire departments if water line relocations are required that could temporarily cause a disruption in service or reduce flow. WSDOT will establish alternative sources of water supply in case of both accidental and/or unanticipated breaks in service.
- During final design and prior to construction, WSDOT will closely coordinate with utility providers to confirm the locations and depths of utilities and to determine if lines can be protected during construction or if they will require relocation. Potential utility conflicts within the WSDOT right of way will be relocated at the utility provider's expense.
- The Design Builder will coordinate scheduling with utility providers to minimize effects of utility relocations and provide them with ample time to schedule equipment and construction crews in advance of project construction.
- The Design Builder will provide clear signage alerting workers to the presence of overhead wires, as necessary, to help prevent accidental interference or damage.

### **Visual Quality**

To address the type of disruption to the visual environment that will occur, light and glare effects will be reduced by

shielding freeway lighting and using downcast lighting. The Bellevue to Lynnwood Improvement Project is being planned, developed, and designed in accordance with Context Sensitive Solutions (CSS) guidelines. These guidelines provide an approach that incorporates community values while meeting local, regional, and national requirements for the safe, efficient, and effective movement of people and goods. CSS considers the elements of mobility, safety, environment, and aesthetics throughout the project. To adhere to these guidelines, the proposed project is being developed to fit its physical surroundings and preserve these elements.

The application of CSS guidelines reduces the need for additional mitigation of visual effects. The Bellevue to Lynnwood Improvement Project will consider community input during development to ensure that local concerns are met early in the project planning and design phases. Measures that are typical for transportation projects, such as retaining existing natural vegetation to the maximum extent practical, and planting new vegetation to screen constructed elements, have been incorporated within the CSS of I-405 and related transportation features. Other areas subject to CSS include structural elements, landscape features, lighting, signs, and special elements such as parking structures and pedestrian bridges.

## **Water Resources**

### **During construction**

Both of the Build Alternatives will be designed and constructed in compliance with Washington State Department of Transportation (WSDOT) and Washington State Department of Ecology (Ecology) technical guidance and federal, state, and local regulations and permits to protect water resources. WSDOT will implement measures to avoid or minimize effects during construction, and will comply with all applicable environmental procedures, rules, and regulations.

The following measures will be followed to minimize or avoid effects to water resources during construction:

- The contractor will mark environmentally sensitive areas, no-fill areas, and mitigation areas with high visibility fencing prior to beginning work in an area. The fencing is to remain in place throughout construction in the area.

The contractor will also clearly delineate sensitive areas, fencing requirements, and permit conditions on plan sheets.

- The contractor will assign an Environmental Inspector(s) trained in permitting requirements, water quality protection, wetland biology, and agency compliance procedures to project sites to ensure compliance with all permit conditions through construction completion and site stabilization.
- The contractor will be required to prepare and implement a temporary erosion and sedimentation control (TESC) plan.
- Should any BMP or other operation not function as intended, the contractor will take additional action to minimize erosion, maintain water quality, and achieve the intended environmental performance.
- Prior to construction, a NPDES Stormwater Construction Permit covering activity in the highway right of way will be obtained from the Washington State Department of Ecology (Ecology). The NPDES permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and its implementation in accordance with permit guidelines. The contractor must also employ measures to minimize or avoid effects on water quality during construction.
- WSDOT will obtain a Hydraulic Project Approval from the Washington Department of Fish and Wildlife prior to construction.
- For work within waters of the United States, WSDOT will obtain a Section 404 permit from the US Army Corps of Engineers for discharging, dredging, or placing fill materials within waters of the US, including wetlands.
- The contractor will identify and develop staging areas for equipment repair and maintenance away from all drainage courses. Washout from concrete trucks will not be dumped into storm drains or onto soil or pavement that carries stormwater runoff. Thinners and solvents will not be used to wash oil, grease, or similar substances from heavy machinery or machine parts. The contractor will be

required to designate a washdown area for equipment and concrete trucks.

- The contractor will be required to implement construction BMPs (such as silt fencing or sedimentation ponds) and to avoid disturbing sensitive areas during the development and use of any staging areas, access roads, and turnouts associated with resurfacing activities.
- The contractor will not allow any in-water work to occur except during seasonal work windows established to protect fish.

BMPs will minimize short-term erosion effects associated with clearing and grading activities, such as increased turbidity and sedimentation in receiving waters.

### **Ecosystems**

Mitigation measures established in the I-405 Corridor Environmental Impact Statement (EIS) (WSDOT 2002a) and Record of Decision (ROD) (WSDOT 2002b) will be implemented for the Bellevue to Lynnwood Improvement Project. This section generally describes those measures established in the EIS to offset effects to wetlands, aquatic resources, and wildlife habitat from the construction of the Bellevue to Lynnwood Improvement Project.

#### *Wetlands*

WSDOT will minimize project effects by following construction BMPs specified in the Highway Runoff Manual (WSDOT 2010a). WSDOT will also develop and implement a TESC plan and an SPCC plan to prevent sediment from entering streams. Additionally, staging and stockpiling areas will be located at a specified distance away from streams to avoid spills and prevent sediment from entering streams or stream buffers.

Other measures to minimize effects during construction include:

- Lighting for this project, in particular at night, will be limited to the amount necessary to complete the work. The lighting will be directed away from the streams and water bodies whenever possible.
- WSDOT will adhere to project conditions identified in the BA and agency concurrence letters.

- WSDOT will implement construction BMPs (such as silt fencing or sedimentation ponds) to avoid disturbing sensitive areas during the development and use of staging areas, access roads, and turnouts associated with resurfacing activities.
- WSDOT will not allow in-water work to occur except during seasonal work windows established to protect fish.

#### *Aquatic Resources*

WSDOT will minimize effects during construction by following construction BMPs specified in the Highway Runoff Manual. WSDOT will also develop and implement a TESC plan and an SPCC plan to prevent sediment, and spilled materials from entering streams. Additionally, staging and stockpiling areas will be located at a specified distance away from streams to avoid spills and sediment from entering streams or stream buffers.

Other measures to minimize effects during construction include:

- Lighting for this project, in particular at night, will be limited to the amount necessary to complete the work. The lighting will be directed away from the streams and water bodies whenever possible.
- WSDOT will adhere to project conditions identified in the Biological Assessment and agency concurrence letters.
- WSDOT will implement construction BMPs (such as silt fencing or sedimentation ponds) to avoid disturbing sensitive areas during the development and use of staging areas, access roads, and turnouts associated with resurfacing activities.
- WSDOT will not allow in-water work to occur except during seasonal work windows established to protect fish.

#### *Wildlife Habitat*

Measures to minimize effects to wildlife and upland vegetation will include:

- WSDOT will adhere to project conditions identified in the BA and agency concurrence letters.
- WSDOT will minimize the amount of vegetation clearing to retain as many trees as practicable.

## Cumulative Effects

No measures, beyond those incorporated in the project design or listed in the *Air Quality Technical Memorandum*, and *Water Resources and Ecosystems Discipline Reports*, will be necessary during construction and operation of the Bellevue to Lynnwood Improvement Project to avoid or minimize adverse cumulative effects.

### *What measures will be taken to mitigate effects of operation?*

#### Traffic and Transportation

We foresee no adverse effects related to operation that will require mitigation.

#### Noise

Noise walls are intended to reduce operational impacts. Two new noise walls (see Exhibit 6-1 and Exhibit 5.2-4) are recommended as part of the Bellevue to Lynnwood Improvement Project.

#### *Exhibit 6-1: Proposed noise walls*

Barrier name	Location	Approximate height (feet)	Approximate length (feet)
Noise Barrier NK1	Along northbound I-405, approximately one-half-mile south of NE 116th Street, near Slater Avenue NE.	10-20	1,610
Noise Barrier NB3	Along the right of way that runs between the I-405 southbound to NE 195th Street off-ramp and 112th Avenue NE.	12-24	2,551

## Recreational, Cultural and Historical Resources

*Recreational* - No measures are needed to mitigate effects to recreational resources during operation.

*Cultural and Archaeological* – No measures are needed to mitigate effects to cultural, archaeological and historical resources during operation.

## Communities, Businesses, and Services

### *Service Providers*

Electronic toll collection will require the use of a *Good to Go!* transponder linked to a payment account to avoid paying a surcharge. Setting up a transponder account could present a

financial burden for low-income drivers and could be challenging for populations with limited English proficiency (LEP). Other toll collection methods may include: 1) Pay by Mail (video license plate match without a *Good to Go!* account and with a surcharge); and (2) Pay by Plate (video license plate match and account).

According to the telephone survey results conducted for the SR 520: I-5 to Medina Bridge Replacement and HOV Project, more than 25 percent of low-income respondents indicated that they would not be able to use a credit, debit, or checking account to prepay their account (WSDOT 2009c). To address these concerns, WSDOT has or will be employing the following measures to make transponders more accessible for environmental justice populations:

- Establish two new walk-up Customer Service Centers in Seattle and Bellevue. Both locations will be transit accessible. Drivers will be able to purchase Good To Go!™ transponders, establish prepaid accounts, and pay outstanding toll bills with cash or Electronic Benefit Transfer (EBT) (Quest) cards issued by Department of Social and Health Services (DSHS) at these centers.
- Explore the possibility of increasing the number of retail outlets at convenient locations, such as grocery stores, convenience stores, or pharmacies throughout the region where transponders can be purchased.
- Share information and train social service providers by providing them with information about tolling and how to obtain transponders. This information would be provided in Chinese, Korean, Japanese, Russian, Spanish, and Vietnamese. These are the same languages that the Department of Licensing uses for translation of driver education materials.

The option also would exist for users to forgo transponder acquisition and instead be billed by mail. This option would include a surcharge, but would not require transponder acquisition or account prepayment.

We do not anticipate that Build Alternative 2 would cause any substantial long-term effects to social resources or public services. In addition, this alternative would not result in disproportionately high and adverse effects to minority or

low-income populations. Therefore, this alternative does not require activities to avoid or minimize adverse effects.

#### ***Business Access***

No measures to avoid or minimize effects during operation are needed.

#### ***Displacements***

No measures to avoid or minimize effects during operation are needed.

#### ***Utilities***

No measures are needed to mitigate effects to utilities during project operation.

#### **Visual Quality**

No measures are needed to mitigate effects to visual quality during operation.

#### **Water Resources**

Both of the Build Alternatives will be designed and operated to meet all current federal, state, and local standards for stormwater management. Design criteria are based on requirements in the *Highway Runoff Manual* (WSDOT 2010a) and the *Hydraulics Manual* (WSDOT 2010b). Additional design guidance and project-specific design criteria will be obtained through the permitting process and agency coordination.

The runoff treatment and flow control described in this report are conceptual and will be revisited as the design continues; however, the level of stormwater management will be equal to or better than described in this report. With proper design, implementation, and maintenance of best management practices (BMPs), stream crossings, and highway stormwater management facilities, there will be no need for additional measures to minimize effects.

#### **Ecosystems**

##### ***Wetlands***

As noted in *Chapter 5 - Project Effects*, wetlands in the study area are currently affected by the lack of modern stormwater control, conveyance, and management facilities. Wetlands and the water quality functions they provide would likely continue to be affected by untreated runoff entering the wetlands, as well as by sediment transport and erosion.

However, enhanced water quality treatment will improve the quality of water entering some wetlands in the study area. Wetland buffers in the study area are also affected by routine maintenance activities. To offset effects to wetlands during project operation, WSDOT will conduct ongoing maintenance of stormwater treatment and detention facilities.

#### *Aquatic Resources*

Measures to offset effects during project operation include:

- Wherever soil tests and site conditions demonstrate the practicability, infiltration of treated stormwater will be utilized.
- Lighting will be placed away from streams and water bodies wherever possible.
- Ongoing maintenance of stormwater treatment and detention facilities by WSDOT will not include the application of any unapproved chemical weed control agents (e.g., herbicides).

#### *Wildlife Habitat*

No measures are necessary to mitigate for operational effects to wildlife habitat.

#### **Cumulative Effects**

No measures are needed to mitigate effects to cumulative effects during operation.

## CHAPTER 7 LIST OF PREPARERS

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I-405, BELLEVUE TO LYNNWOOD IMPROVEMENT PROJECT ENVIRONMENTAL ASSESSMENT

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## CHAPTER 8 REFERENCES

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### *GIS Data Sources*

#### **Exhibit 1-1**

All data from base data referenced below.

#### **Exhibit 4-1**

All data from base data referenced below.

#### **Exhibit 4-2**

WSDOT (Washington State Department of Transportation). 2006 – 2011. I-405 Staff; Corridor Mile Post, Lane Striping, Noise Wall, Retaining Wall, Stormwater Feature, Pavement, Existing Right-of-Way, Proposed Right-of-Way, Culvert.

#### **Exhibit 5.1-1: Project area**

WSDOT (Washington State Department of Transportation). 2006 – 2011. I-405 Staff; Spatial Data Catalog, project limits.

#### **Exhibit 5.1-2: 2015 morning peak three-hour Build and No Build alternatives vehicles and speed – southbound I-405**

WSDOT (Washington State Department of Transportation). 2006 – 2011. I-405 Staff; modeled vehicle volumes and speeds.

#### **Exhibit 5.1-3: 2015 afternoon peak three-hour Build and No Build alternatives vehicles and speed – northbound I-405**

WSDOT (Washington State Department of Transportation). 2006 – 2011. I-405 Staff; modeled vehicle volumes and speeds.

#### **Exhibit 5.2-4: Evaluated noise barriers**

PB. 2007. New Barrier, Barrier Moved, and Barrier Upgrade.

WSDOT (Washington State Department of Transportation). 2006 – 2011. I-405 Staff; New Barrier; Barrier Moved; project limits.

#### **Exhibit 5.3-1: Recreational and cultural resources identified in the study area**

WSDOT (Washington State Department of Transportation). 2006 – 2010. I-405 Staff; Project Limits, Study Area (for Osborn Pacific).

#### **Exhibit 5.4-1: Project area employment and Population Forecast Analysis Zones**

WSDOT (Washington State Department of Transportation), Spatial Data Catalog, 2010, Forecast Analysis Zones from Puget Sound Regional Council, 2001.

#### **Exhibit 5.4-4: Social and public services within the project area**

Parametrix. 2007. Public Services.

WSDOT (Washington State Department of Transportation), 2011, school.

#### **Exhibit 5.5-1: Representative viewpoints**

HDR. 2006 – 2007. Viewpoints.

**Exhibit 5.6-1: Water resources in the project area**

FEMA (Federal Emergency Management Area). 1996. Floodway, 100-year Floodplain and 500-year Floodplain.

King County, 2006, Topo Drainage for Subbasins, Basins, Watersheds, and WRIAs.

Puget Sound LiDAR Consortium, LiDAR, 2002.

[http://pugetsoundlidar.ess.washington.edu/About\\_PSLC.htm](http://pugetsoundlidar.ess.washington.edu/About_PSLC.htm)

**Exhibit 5.6-2: Location of Group B wells**

WSDOH (Washington State Department of Health). 2004, 2005. Wellhead Protection Areas, Group A and B Wells.

**Exhibit 5.7-1: Ecosystems**

HDR Inc. 2007. Study Area Boundaries.

**Exhibit 5.7-3: Project area basins and streams**

King County, 2006, Topo Drainage for Catchments, Basins, Watersheds, and WRIA's.

Puget Sound LiDAR Consortium, LiDAR, 2002.

[http://pugetsoundlidar.ess.washington.edu/About\\_PSLC.htm](http://pugetsoundlidar.ess.washington.edu/About_PSLC.htm)

**Exhibit 5.7-5: Wetlands affected by the proposed project**

WSDOT (Washington State Department of Transportation). 2006 – 2007. I-405 Staff; Wetlands.

**Exhibit 5.8-1: Cumulative effects geographic boundaries**

HDR Inc. 2007. Study Area Boundaries.

***Base Data***

All GIS exhibits contain one or more of the following as base layers:

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## APPENDIX A: CROSS-REFERENCE OF NEPA ELEMENTS OF THE ENVIRONMENT AND ENVIRONMENTAL ASSESSMENT SECTIONS

NEPA Element of the Environment	Location in the Environmental Assessment
Agricultural and Farmlands	Not applicable
Air Quality	Not applicable
Coastal Areas and Shorelines	Not applicable
Cumulative Impacts	Section 5.8 Cumulative Effects
Energy	Not applicable
Environmental Justice	Section 5.4 Communities, Businesses, and Services
Floodplains	Section 5.6 Water Resources
Groundwater	Section 5.6 Water Resources
Hazardous Materials	Not applicable
Historic, Cultural, and Archaeological Resources	Section 5.3 Recreational and Cultural Resources
Land Use, Land Use Plans, and Growth Management	Section 5.4 Communities, Businesses, and Services
Noise	Section 5.2 Noise
Public Lands (Section 4(f), 6(f), and Forests)	Section 5.3 Recreational and Cultural Resources
Public Services and Utilities	Not applicable
Social and Economic Conditions	Section 5.4 Communities, Businesses, and Services
Soils and Geology	Not applicable
Surface Water	Section 5.6 Water Resources
Transportation	Section 5.1 Traffic and Transportation
Visual Impacts, Light, and Glare	Section 5.5 Visual Quality
Water Quality	Section 5.6 Water Resources
Wetlands	Section 5.7 Ecosystems
Wild and Scenic Rivers	Not applicable
Wildlife and Vegetation	Section 5.7 Ecosystems
Fish and Aquatic Resources	Section 5.7 Ecosystems

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## APPENDIX B: ACRONYMS USED IN THIS REPORT

Acronym or Abbreviation	Meaning
AASHTO	American Association of State Highway and Transportation Officials
ACM	asbestos-containing materials
APA	aquifer protection area
APE	area of potential effects
BA	biological assessment
BMP	best management practice
BNSF	Burlington Northern Santa Fe Railway
BRT	bus rapid transit
CDA	critical drainage area
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CSS	context-sensitive solutions
CWA	Clean Water Act
DAHP	Washington State Department of Archaeology and Historic Preservation
dB	decibels
dBA	decibels in the A-weighted scale to show relative loudness of sound
EA	environmental assessment
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FAZ	forecast analysis zone
FTA	Federal Transit Administration

<b>Acronym or Abbreviation</b>	<b>Meaning</b>
GIS	geographic information system
GMA	Growth Management Act
GP	general-purpose
HOV	high-occupancy vehicle
MP	milepost
Leq	equivalent A-weighted sound level
Leq(h)	equivalent A-weighted sound level averaged hourly
LWD	large woody debris
LOS	level of service
MOA	memorandum of agreement
NAC	noise abatement criteria
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHP	National Heritage Program
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
OSHA	Occupational Safety and Health Administration
PHS	priority habitat species
PSRC	Puget Sound Regional Council
ROD	record of decision
SEPA	State Environmental Policy Act
SOV	single-occupant vehicle

<b>Acronym or Abbreviation</b>	<b>Meaning</b>
SPCC	spill prevention control and countermeasure (plan)
SR	State Route
TDM	transportation demand management
TESC	temporary erosion sedimentation control
TMDL	total maximum daily load
TMP	traffic management plan
TNM	traffic noise model
UDP	unanticipated discovery plan
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
WAC	Washington Administrative Code
WDFW	Washington State Department of Fish and Wildlife
WDNR	Washington State Department of Natural Resources
WRHP	Washington Register of Historic Places
WSDOT	Washington State Department of Transportation

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## APPENDIX C: GLOSSARY

<b>Word or Term</b>	<b>Meaning</b>
area of potential effect (APE)	This is the area in which historic properties, if they are present, could be directly or indirectly affected by the project.
baseline conditions	Baseline conditions for the I-405, SR 520 to I-5 Improvement Project represent what will exist in the future after the Kirkland Nickel Project (which has already been funded and environmentally cleared) is constructed. Baseline conditions provide an important point of comparison for understanding the effects of the proposed build alternatives for the proposed SR 520 to I-5 Improvement Project.
best management practice (BMP)	Innovative and improved environmental protection tools, practices, and methods that have been determined to be the most effective, practical means of avoiding or reducing environmental impacts.
bus rapid transit (BRT)	An express, or limited-stop, rubber-tired transit system operating predominately in high-occupancy vehicle (HOV) lanes.
cultural resource	Any district, site, building, structure, object, person or people, document, or traditional place that may be important in American history or prehistory.
cumulative effect	The effect on the environment that results from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions. Cumulative effects can result from individually minor but collectively noticeable actions taking place over a period of time.
decibel (dB)	A logarithmic based unit of measure of sound pressure.
delay	The increased travel time experienced because of circumstances that impede the desirable movement of traffic.
delineation	Establishing the boundaries of a wetland by applying adopted jurisdictional methods.
demand	The desire for travel by potential users of the transportation system.
direct effect	An effect caused by an action or alternative and occurring at the same time and location. Effects may be ecological, aesthetic, historic, cultural, economic, social, or health-related.
direct-access ramp	A freeway ramp that provides a direct connection to the freeway for buses, carpools, and vanpools. This avoids the need to cross several lanes of general-purpose traffic, saving time and improving traffic flow and safety.
discharge	Runoff leaving an area via overland flow, built conveyance

<b>Word or Term</b>	<b>Meaning</b>
	systems, or infiltration facilities; a rate of fluid flow; or a volume of fluid passing a point per unit of time.
displacement	Removal of a business, residence, or public facility from its existing location. In the context of transportation improvements, displacement is generally the result of property acquisition for right of way expansion or elimination of access to a property due to traffic revisions.
disturbed mixed forest	A forest comprised of both coniferous and deciduous tree species, including native and non-native species, with structural and species composition that has been altered due to past human activities.
down-gradient	The direction of flow; i.e., downstream.
downstream	Referring to the direction of the flow of a stream or river.
duration	The length of time of an event.
ecosystem	A community of organisms interacting with each other, and the environment in which they live.
EDR Report	A list of databases searched for potential hazardous materials contamination, including selected detailed information from federal and state lists, and maps illustrating the identifiable sites within the indicated search radius.
effect	Something brought about by a cause or agent; a result. This may include ecological, aesthetic, historic, cultural, economic, social, health, or other effects, whether direct, indirect, or cumulative. Effects may include those resulting from actions that may have both beneficial and detrimental effects.
element	Within the context of a local government comprehensive plan, one of the functional chapters required by the Washington State Growth Management Act, including: land use, housing, capital facilities, utilities, rural development (counties only), transportation, economic development, and parks and recreation. Optional elements, e.g., subarea plans or other topics, may be addressed as well.
eligible	Refers to cultural resources that meet the National Park Service criteria for listing on the National Register of Historic Places.
emergency vehicle	Any vehicle used to respond to an incident or collision. Examples include police, fire, ambulance, maintenance vehicles, and incident response tow trucks.
emergent	A plant that grows rooted in shallow water or saturated soil, where most of the plant emerges from the water or above the ground surface and stands vertically.
emergent wetlands	Wetlands comprised of plants that are rooted in shallow water or saturated soil but have foliage that extends out of the water or

<b>Word or Term</b>	<b>Meaning</b>
	above the ground surface.
emission	Pollution discharged into the atmosphere from smokestacks, other vents, surface, vehicles, and other sources.
endangered species	Any species that is in danger of extinction throughout all or a substantial portion of its range.
Endangered Species Act (ESA)	Federal legislation adopted to prevent the extinction of plants and animals.
enforcement area	A paved 14-foot lane and shoulder extending approximately 1300 feet along the median side of the freeway and reserved as a refuge for monitoring and enforcement of restrictions on HOV and express toll lanes use by the State Patrol.
environmental impact statement (EIS)	A document prepared under the National Environmental Policy Act and/or the State Environmental Policy Act that identifies and analyzes, in detail, environmental effects of a proposed action. As a tool for decision-making, the EIS describes positive and negative effects and examines reasonable alternatives for an undertaking.
environmental justice	The provisions of Executive Order 12898 that require each federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse health and/or environmental effects on minority and/or low-income populations.
Equivalent Sound Level ( $L_{eq}$ )	The equivalent steady-state sound level in A-weighted decibels for a stated period of time, which contains the same acoustic energy as the actual time-varying sound level for the same period of time.
erosion	The wearing away of soil or rock by the action of running water, wind, ice, or geologic agents. For this analysis, erosion relates primarily to stormwater runoff.
express toll lane	A limited-access freeway lane that is actively managed through a variable toll system to regulate its use and thereby maintain express travel speeds and reliability. Toll prices rise or fall in real time as the lane approaches capacity or becomes less used. This ensures that traffic in the express toll lane remains flowing at express travel speeds of 45 to 60 miles per hour. Toll prices may differ for carpools, transit, motorcycles, and single-occupant vehicles. Tolls are collected electronically using overhead scanners that read a transponder inside the vehicle and automatically debit the owner's account.

<b>Word or Term</b>	<b>Meaning</b>
feasible and prudent	Within the context of a Section 4(f) analysis, this phrase refers to the viability of an alternative that avoids the use of a Section 4(f) resource. The term "feasible" refers to the constructability of a project -whether or not it can be built using current construction methods, technologies, and practices. The term "prudent" refers to how reasonable the alternative is—in essence, whether or not it makes sense.
Federal Highway Administration (FHWA)	One of several agencies in the U.S. Department of Transportation, the FHWA provides federal financial assistance to the states through the Federal Aid Highway Program, the purpose of which is to construct and improve the National Highway System, urban and rural roads, and bridges.
federally-listed species	Any species of fish, wildlife, or plant that has been determined by the U.S. Fish and Wildlife Service or National Marine Fisheries Service to be endangered or threatened under Section 4 of the Endangered Species Act.
FEMA floodway	The federally designated channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 100-year flood can be conveyed without substantial increases in flood heights. The floodways in the Federal Emergency Management Agency Flood Insurance Study are presented to local agencies as a minimum basis for additional floodway studies.
floodplain	Any land area susceptible to being inundated by flood waters from any source. This is typically the flat or nearly flat land on the bottom of a stream valley or tidal area that is covered by water during floods, including the flood fringe and floodway.
foreground	In a visual analysis, this distance zone is where the viewer has impressions of immediate details and intensity of color is at a maximum. This area can be designated with clarity and simplicity not possible for the middleground and background because the observer is a direct participant (0 to 0.25 mile).
forest duff	Leaves, conifer needles, branches, and other organic debris in various stages of decomposition covering the forest floor on top of the mineral soil; typical of conifer forests in cool climates where the rate of decomposition is slow and accumulation exceeds decay.
forested land cover	Vegetated areas where trees with an average height greater than 20 feet are the predominant vegetation. See also: "shrubs/grasses land cover" and "maintained vegetation land cover".
forested wetland	A wetland characterized by woody vegetation that is 20 feet tall or taller.

<b>Word or Term</b>	<b>Meaning</b>
gantry	A framework spanning toll lanes that may contain advance warning signs, signals, monitoring equipment, and electronic toll readers needed to communicate with the vehicle transponders. This is part of the technology that replaces a traditional toll plaza and enables freeway-speed, electronic toll collection. See also: "transponder."
general-purpose lane	A freeway or arterial lane available for use by all traffic.
geographic information system (GIS)	A digital computer mapping system that can overlay a wide variety of data such as land use, utilities, and vegetative cover, and provide a spatial analysis.
groundwater	That portion of the water below the ground surface that is free flowing within the soil particles. Groundwater typically moves slowly, generally at a downward angle because of gravity, and eventually enters into streams, lakes, and oceans.
Group A Wells	Groundwater wells that serve 15 or more households.
Group B Wells	Groundwater wells that serve 2 to 14 households.
habitat	The environment or specific surroundings where a plant or animal grows or lives.
high-occupancy vehicle (HOV)	High-occupancy vehicle is a special designation for a bus, carpool, or vanpool provided as an encouragement to increase ride-sharing. Specially designated HOV lanes and parking are among the incentives for persons to pool trips, use fewer vehicles, and make the transportation system more efficient. HOV lanes are generally inside (left-side) lanes, and are identified by signs and a diamond on the pavement. Currently, two or more (2+) occupants are required to use the I-405 HOV lanes. Motorcycles are allowed to use freeway HOV lanes as well.
historic property	A cultural resource that is on or eligible for listing on the National Register of Historic Places.
hydrology	Within the context of a wetland, permanent or periodic inundation or prolonged soil saturation sufficient to create anaerobic conditions in the soil.
impervious surface	Pavement, roofs, and other compacted or hardened areas that do not allow the passage of rainfall or runoff into the ground.
indirect effect	An effect that occurs later in time or is removed in distance from the proposed action, but is still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems.
lacustrine	Processes related to sediments deposited in a lake

<b>Word or Term</b>	<b>Meaning</b>
	environment.
large woody debris	Logs, limbs, or root wads that are waterward of the ordinary high water line. To qualify as large woody debris, it must be of sufficient size to be resistant to erosion, provide bank stability, or help maintain or create habitat features important to fish life.
level of service (LOS)	A measure of how well a freeway or local signalized intersection operates. For freeways, LOS is a measure of traffic congestion typically based on volume-to-capacity ratios. For local intersections, LOS is based on how long it takes a typical vehicle to clear the intersection. Other criteria also may be used to gauge the operating performance of transit, non-motorized, and other transportation modes.
listed species	Any species of fish, wildlife, or plant that has been determined to be endangered or threatened. See also: “federally-listed species” and “state-listed species”.
$L_{max}$	Maximum sound level, in decibels. This is the maximum value of the noise level that occurs during a single event.
$L_{min}$	Minimum sound level, in decibels. This is the minimum value of the noise level that occurs during a single event.
$L_n$	The A-weighted sound level, in decibels, that is exceeded n percent of the time in a given interval. For example, $L_{10}$ is the A-weighted sound level exceeded 10 percent of the time over the given interval (usually 1 hour).
low-income	A household income that is at or below the federally designated poverty level for a given household size.
maintained vegetation land cover	Areas of roadside vegetation, including roadway medians and shoulders that are regularly maintained, and landscaped areas consisting primarily of plants grown for ornamental value for residential, commercial, and industrial developments. Maintained vegetation typically provides little to no value as wildlife habitat. See also: “forested land cover” and “shrubs/grasses land cover”.
maintenance area	Area that has met the National Ambient Air Quality Standards (NAAQS) for the criteria pollutants designated in the Clean Air Act and is being managed to continue to meet the NAAQS.
Metro Transit	The King County public transit agency.
Metropolitan Transportation Plan (MTP)	The detailed long-range plan for future investments in the central Puget Sound region’s regional transportation system. For planning purposes, the MTP also is recognized as the central Puget Sound region’s Regional Transportation Plan.

<b>Word or Term</b>	<b>Meaning</b>
minimization	Taking measures to reduce potential effects to the smallest practical amount, extent, size, or degree. Minimization could include alignment shifts, a commitment to seasonal construction windows, replacement of land or facilities, restoration or landscaping, or payment of fair market value for affected lands.
minority	Individuals listed in the Census as Black (a person having origins in any of the black racial groups of Africa); Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); American Indian/Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition); or some other race.
mitigation	An effort to: (1) avoid the impact altogether by not taking a certain action or parts of an action; (2) minimize the impact by limiting the magnitude of the action and its implementation, by using technology or by taking affirmative steps; (3) rectify the impact by repairing, rehabilitating, or restoring the affected environment; (4) reduce or eliminate the impact over time by preservation and maintenance operations; (5) compensate for the impact by replacing, enhancing or providing substitute resources or environments; and/or (6) monitor the impact and take appropriate corrective measures.
mitigation (Section 4(f))	Within the context of a Section 4(f) analysis, an effort to replace land or facilities either with resources that are comparable in value and function, or with monetary compensation that can be used to enhance the remaining land or facilities. The cost of mitigation should be a reasonable public expenditure in light of the severity of the impact on the Section 4(f) resource.
modeling	Use of statistics and mathematical equations to simulate and predict real events and processes.
National Ambient Air Quality Standards (NAAQS)	Standards established by the Environmental Protection Agency under the Clean Air Act for pollutant concentrations in outside air throughout the country.

<b>Word or Term</b>	<b>Meaning</b>
National Environmental Policy Act (NEPA)	Federal legislation adopted in 1969 that established a national environmental policy intentionally focused on federal activities and the desire for a sustainable environment balanced with other essential needs of present and future generations. NEPA also established federal agency responsibility and created the basic framework for integrating environmental considerations into federal decision-making. The fundamentals of the NEPA decision-making process include: an interdisciplinary approach in planning and decision-making for actions that affect the human environment, interagency coordination, consideration of alternatives, examination of potential environmental consequences and mitigation, documentation of the analysis, and making the information available to the public for comment prior to implementation.
National Historic Preservation Act (NHPA)	Federal legislation adopted in 1966 that requires federal agencies to consider the effects of their undertakings on historic properties and provide the Advisory Council on Historic Preservation with an opportunity to comment on such undertakings.
National Register of Historic Places (NRHP)	Authorized under the National Historic Preservation Act of 1966, this is the Nation's official list of properties and other cultural resources that are recognized as deserving preservation. The National Register is administered by the National Park Service as part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archaeological resources. Properties listed in the register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.
noise abatement criteria	The FHWA noise abatement criteria specify exterior and interior noise levels for various land activity categories such as residential and commercial. WSDOT considers a noise impact to occur if predicted equivalent hourly noise levels (Leq (h)) approach within 1 dBA of the noise abatement criteria.
noise level	The sound pressure level, measured using a meter with an "A" frequency weighting and reported as dBA.
noise wall	A designed wall that provides a noise buffer between a noise source and adjacent residences or other sensitive noise receptors.
off-peak	In relation to transportation, public services and utilities, off-peak means those times when fewer persons use the facility, service, or utility.
off-peak direction	The travel direction on the freeway with the lower demand.

<b>Word or Term</b>	<b>Meaning</b>
ordinary high water mark (OHWM)	The elevation marking the highest water level that is so common and maintained for a sufficient time in all ordinary years that it leaves evidence upon the landscape, such as a clear and natural line impressed on the bank, changes in soil character, destruction of or change in vegetation, or the presence of litter and debris. Generally, it is the point where the natural vegetation changes from predominately aquatic to upland species. Where the ordinary high water mark cannot be found, it is the line of mean annual flood—the highest the water gets in an average year—but not the highest it gets during extreme flooding.
ozone (O <sub>3</sub> )	Ozone is a natural form of oxygen that provides a protective layer shielding the earth from ultraviolet radiation. It also is a chemical oxidant and major component of photochemical smog. Ozone can seriously impair the respiratory system and is one of the most widespread of all the criteria pollutants regulated under the Clean Air Act. Ozone in the troposphere is produced through complex chemical reactions of nitrogen oxides, which are among the primary pollutants emitted by combustion sources; hydrocarbons, released into the atmosphere through the combustion, handling and processing of petroleum products; and sunlight.
palustrine	Tidal or non-tidal freshwater areas dominated by trees, shrubs, persistent emergents, mosses, or lichens. Palustrine also includes wetlands lacking this vegetation but having the following characteristics: area less than 20 acres; no active wave-formed or bedrock shoreline; and water depth in the deepest part is less than 6.6 feet at low water.
palustrine emergent (PEM)	A wetland characterized by erect, rooted, non-woody plants such as cattails, rushes, and sedges.
palustrine forested (PFO)	A wetland characterized by woody vegetation that is 20 feet tall or taller.
palustrine scrub-shrub (PSS)	Areas dominated by woody vegetation less than 20 feet tall, such as trees, shrubs, or young trees that are stunted due to environmental conditions.
park-and-ride	A facility where individuals can park their vehicle for the day and access public transportation or rideshare for the major portion of their trip.
peak	The maximum sound level during a given time interval when the normal frequency and time weighting is not used.
peak direction	The travel direction on the freeway with the higher demand.
peak flow	The maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event.

<b>Word or Term</b>	<b>Meaning</b>
peak hour	The hour in the morning or in the afternoon when the maximum demand occurs on a given transportation facility or corridor.
peak period	The period of the day during which the maximum amount of travel occurs. It may be specified as the morning (AM) or afternoon or evening (PM) peak.
persistence	Refers to the length of time a compound remains in the environment, once introduced. A compound may persist anywhere from less than a second to indefinitely.
pollutant	Any substance introduced into the environment that contaminates or otherwise adversely affects the usefulness of a resource.
publicly owned	Property that is owned and/or operated by a public entity. If a governmental body has a proprietary interest in the land (such as fee ownership, drainage easements or wetland easements), it can be considered publicly owned. Land subject to a public easement in perpetuity can also be considered to be publicly owned land for the purpose for which the easement exists.
Puget Sound Regional Council (PSRC)	The Metropolitan Planning Organization (MPO) and Regional Transportation Planning Organization (RTPO) for the central Puget Sound region, which is comprised of Snohomish, King, Pierce, and Kitsap counties. The MPO and RTPO is the legally-mandated forum for cooperative decision-making about regional growth policies and transportation issues in the metropolitan planning area.
race	A characteristic of population. In the 2000 Census, race included White and Non-White (Persons of Color). Non-White includes Black or African-American alone, American Indian or Alaskan Native alone, Asian alone, Native Hawaiian or other Pacific Islander alone, some other race alone, or a mixture of two or more races. Non-White can include persons of Hispanic/Latino heritage; some Hispanic/Latinos, however, are White.
record of decision (ROD)	A document prepared by the federal lead agency that presents the basis for the decision reached after completion of the Final EIS. The ROD summarizes any mitigation measures that will be incorporated into the project, and documents any required Section 4(f) or other approvals.
resident fish	Fish that do not migrate out to the ocean, but remain in fresh water.
retaining wall	A structure used to hold earth in place where the natural grade cannot be maintained.

<b>Word or Term</b>	<b>Meaning</b>
right of way	Land purchased prior to the construction of transportation improvements along with land for sound walls, retaining walls, stormwater facilities, and other project features. This also includes permanent or temporary easements for construction and maintenance. Vacant land may also be set aside for future highway expansion under certain circumstances.
riparian	Pertaining to anything connected with or immediately adjacent to the banks of a stream, river, or other water body.
riparian area	The land and habitat adjacent to streams, lakes, estuaries, or other waterways, comprising the transition area between the aquatic ecosystem and the nearby upland terrestrial ecosystem. Riparian corridors, or zones, identified by soil characteristics or plant communities, include the wet areas in and near streams, ponds, lakes, springs, and other surface waters.
salmonid	Any member of the family Salmonidae, which includes all species of salmon, trout, and char (including bull trout).
scrub-shrub wetland	Wetland dominated by woody vegetation less than 20 feet tall. The vegetation may include shrubs, young trees, and trees or shrubs that may be stunted because of environmental conditions. Scrub-shrub wetlands are flooded for extended periods during the growing season.
secondary-level treatment	A degree of biological treatment of wastewater that consumes and removes more than 90 percent of the pollutants.
Section 106 of the National Historic Preservation Act	Under Section 106 of the Act, federal agencies must identify and evaluate cultural resources and consider how their undertakings affect historic properties eligible for inclusion in the National Register of Historic Places. See also: "National Historic Preservation Act".
Section 4(f) of the U.S. Department of Transportation Act	Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 USC 303) declares as a national policy that a special effort be made to preserve the natural beauty of the countryside, including public park and recreation lands, wildlife and waterfowl refuges, and historic sites.
sector	Within the context of an economic analysis, a high-level grouping of specific industries with common characteristics based on the standard industrial classification system.
sensitive species	Any native wildlife species that is vulnerable or declining and is likely to become endangered or threatened throughout a significant portion of its range without cooperative management or removal of threats.

<b>Word or Term</b>	<b>Meaning</b>
shrubs/grasses land cover	Vegetated areas where woody plants (distinguished from a tree by their multiple stems and lower height) less than 20 feet tall, grasses and grass-like plants, or a combination of these are the predominant vegetation. See also: “forested land cover” and “maintained vegetation land cover”.
significance	Within the context of a Section 4(f) analysis, an expression of whether a resource is considered important within the recreational, park, and refuge objectives of the community. Barring a determination from the official with jurisdiction to the contrary, the Section 4(f) resource is typically presumed to be significant.
single-occupant vehicle (SOV)	A vehicle having one occupant (i.e., the driver).
social resources	Elements of the community or social environment, including population, housing, community facilities, religious institutions, social and employment services, cultural and social institutions, and government institutions.
sole-source aquifer	An aquifer that has been designated by the Environmental Protection Agency as the sole or principal source of drinking water for an area. A sole-source aquifer receives special federal protection because few or no reasonable alternatives exist for the area served to acquire drinking water.
species of concern	Species whose conservation standing is of concern to the U.S. Fish and Wildlife Service, but for which status information is still needed for consideration to list the species under the Endangered Species Act.
Spill Prevention Control and Countermeasures (SPCC) Plan	A plan for minimizing effects to soil, surface water, and groundwater in the event of a spill of contaminated soil, petroleum products, contaminated water, or other hazardous substances. The SPCC plan addresses construction procedures, equipment, and materials.
State Environmental Policy Act (SEPA)	Washington State legislation adopted in 1974, that establishes an environmental review process for all development proposals and major planning studies prior to taking any action. SEPA includes early coordination to identify and mitigate any substantial issues or significant effects that may result from a project or study.
State Historic Preservation Officer (SHPO)	A governor-appointed position and, typically, a member of a state historic preservation agency, the SHPO reviews projects for compliance with Section 106 of the National Historic Preservation Act.
state-listed species	Species of wildlife that are considered to be at-risk and are protected by Washington State laws.

<b>Word or Term</b>	<b>Meaning</b>
state monitor species	Wildlife species that are monitored by the Washington State Department of Fish and Wildlife for status and distribution to avoid their becoming threatened or endangered.
stormwater	The portion of precipitation that does not naturally percolate into the ground or evaporate, but flows overland, in channels, or in pipes into a defined surface water channel or a constructed stormwater facility.
stormwater detention	The process of storing stormwater in manmade facilities such as ponds or vaults and releasing the stormwater at a controlled rate. This helps control the volume and rate at which stormwater enters streams and rivers. Controlling the flow of stormwater helps maintain or improve conditions in the streams and minimizes erosion of stream banks.
subbasin	A smaller portion, or subarea, of a watershed or catchment area.
threatened species	Any species that is likely to become endangered within the foreseeable future throughout all or a substantial portion of its range.
transponder	A small electronic device required in all toll-paying vehicles that is designed to communicate with electronic readers along the route that automatically deduct the toll amount from the vehicle owner's prepaid account balance. This technology enables freeway speed, electronic toll collection without the need to stop at a toll plaza.
transportation corridor	Primary travel routes between major origins and destinations within a region.
travelshed	The geographic area encompassing the origins and destinations of all vehicles using a given facility such as a highway. The purpose of a travelshed is to identify the effects on the users of the facility.
Unanticipated Discovery Plan	A set of procedures identifying how the project will respond to archaeological finds or human remains found unexpectedly during project construction.
urban forest	A vegetative cover type that is typically dominated by big-leaf maple and alder with an understory of smaller herbaceous and shrub species.
urban growth boundary	For jurisdictions planning under the Washington State Growth Management Act, the boundary that divides areas that are planned to support urban-type development and densities (typically having a minimum density of four residential units per acre) from those areas that are expected to remain rural in character and level of development (typically having fewer than four residential units per acre).

<b>Word or Term</b>	<b>Meaning</b>
use	Within the context of a Section 4(f) analysis, use generally occurs when (1) land from a Section 4(f) site is acquired for a transportation project, (2) there is an occupancy of land that is adverse in terms of the statute's preservationist purposes, or (3) the proximity effect of the transportation project on the Section 4(f) site, without acquisition of land, is so great that the functions of the Section 4(f) site are substantially impaired.
vehicle	Any car, truck, van, motorcycle, or bus designed to carry passengers or goods. Bicycles and other pedestrian-oriented vehicles are not included in this definition.
view	That which can be seen either from or toward the transportation facility.
viewpoint	The position or location of the viewer.
viewshed	The area that can be seen from a given viewpoint or group of viewpoints; it is also that area from which that viewpoint or group of viewpoints can be seen.
visual effect	The degree of change in visual resources and the viewer response to those changes caused by facility development and operations.
visual quality	A subjective measure of the character of the visual resource. The many factors that contribute to a landscape's visual quality are grouped under intactness, unity, and vividness.
visual quality assessment matrix	An evaluation tool that assigns a numeric rating to physical aspects of the viewshed.
visual resources	The collection of all features and things that can be seen in an area.
water resource inventory area (WRIA)	An administrative and planning area designated by the Washington State Department of Ecology for addressing water and aquatic resource management issues. Sixty-two WRIsAs have been designated, corresponding to the state's major watershed basins. The terms WRIA and watershed are frequently used interchangeably, although a WRIA may include more than one watershed.
watershed	The region of land that drains into a specific body of water such as a river, lake, sea, or ocean. Rain that falls anywhere within a given body of water's watershed will eventually drain into that body of water.
wetland	Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs,

<b>Word or Term</b>	<b>Meaning</b>
	and similar areas.
wetland hydrology	The condition where water is present during a portion (between 5 and 12.5 percent) of the annual growing season.

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## **APPENDIX D: AGENCY AND TRIBAL CORRESPONDENCE**

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**Washington State  
Department of Transportation**

**Northwest Washington Division**  
Urban Corridors Office  
401 Second Avenue South, Suite 560  
Seattle, WA 98104  
206-464-1221/Fax 206-464-1189  
[www.wsdot.wa.gov](http://www.wsdot.wa.gov)

December 27, 2006

Allyson Brooks, Ph.D.  
State Historic Preservation Officer  
Office of Archaeology and Historic Preservation  
P.O. Box 48343  
Olympia, WA 98504-8343

**Re: I-405, SR 520 to I-5 Improvement Project**

Dear Dr. Brooks:

Per provisions of 36 CFR 800, we are initiating consultation for the above project. Please review the enclosed Areas of Potential Effect (APE) maps. A detailed project description is also attached.

The project APE is shown as the red line on the enclosed aerial photo-based maps. It includes areas where archaeological resources may be encountered and areas where historic structures may be directly or indirectly affected. Potential effects to archaeological sites may occur where ground disturbance will take place. Project activities and structures that will produce ground disturbance include grading, pilings for new bridge structures, retaining walls, noise walls, detention ponds, conveyances, and ecology embankments. This area is confined largely to the existing I-405 right-of-way, but also includes intersections that provide access to I-405 and some properties adjacent to the I-405 right-of-way.

Historic structures may be affected in the area adjacent to I-405 right-of-way, and the intersections where improvements are scheduled. The APE boundary encompasses either one tax lot on each side of the right-of-way and the feeder intersections and connector streets or 200 feet from their margins, whichever is less. This definition was chosen for several reasons:

- Much of the project area vicinity is an extensively developed commercial and industrial zone where proposed improvements will not substantially change viewscales in this highly urbanized area.
- Many commercial lots along I-405 in this industrialized area are large, with the existing structure located a considerable distance from the roadway. The planned work thus would not have an effect on character of the viewshed, noise level, or vibration level for properties more than 200 feet away from the right of way.

The I-405, SR 520 to I-5 Improvement Project will be a design-build project. As such, the location of some project elements will not be known until a design-build contractor is selected.

Due to the design-build process, it will not be possible to conduct a full archaeological survey prior to completion of the environmental review process. We are currently working with your office, the Federal Highway Administration, the Federal Transit Administration, and Tribal governments to develop programmatic agreement for all the I-405 corridor design-build projects that would create a process for phasing cultural resource investigations.

We look forward to your concurrence with the project APE. Please contact me at 206-464-1236, email at juellk@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink that reads "Kenneth E. Juell". The signature is written in a cursive, flowing style.

Kenneth E. Juell  
Cultural Resources Specialist  
WSDOT Urban Corridors Office  
401 2<sup>nd</sup> Avenue South, Suite 560  
Seattle, WA 98104

Enclosures

cc: Sharon Love, FHWA, w/o enclosures  
Allison Ray, WSDOT I-405 Office, w/o enclosures  
Sasha Visconty, WSDOT UCO, w/o enclosures  
Barbara Bundy, WSDOT HQ, w/o enclosures  
William Jordan, WSDOT I-405 Office, w/o enclosures



## Corridor Program

Congestion Relief & Bus Rapid Transit Projects

December 29, 2006

Honorable Cecile Hansen, Chair  
Duwamish Tribe  
4717 West Marginal Way SW  
Seattle, WA 98106

### **Re: I-405, SR 520 to I-5 Improvement Project**

Dear Chairperson Hansen,

The Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) are preparing an Environmental Assessment (EA) to document the environmental consequences and possible mitigation measures for the I-405, SR 520 to I-5 Improvement Project within the existing Interstate 405 (I-405) corridor. This project is located between the cities of Bellevue and Lynnwood, WA. Please see the attached project description.

The project Area of Potential Effect (APE) is shown as the red line on the enclosed aerial photo-based maps. It includes areas where archaeological resources may be encountered and areas where historic structures may be directly or indirectly affected. Potential effects to archaeological sites may occur where ground disturbance will take place. Project activities and structures that will produce ground disturbance include grading, pilings for new bridge structures, retaining walls, noise walls, detention ponds, conveyances, and ecology embankments. This area is confined largely to the existing I-405 right-of-way, but also includes intersections that provide access to I-405 and some properties adjacent to the I-405 right-of-way.

Historic structures may be affected in the area adjacent to I-405 right-of-way, and the intersections where improvements are scheduled. The APE boundary encompasses either one tax lot on each side of the right-of-way and the feeder intersections and connector streets or 200 feet from their margins, whichever is less. This definition was chosen for several reasons:

- Much of the project area vicinity is an extensively developed commercial and industrial zone where proposed improvements will not substantially change viewscales in this highly urbanized area.
- Many commercial lots along I-405 in this industrialized area are large, with the existing structure located a considerable distance from the roadway. The planned work thus would not have an effect on character of the viewshed, noise

level, or vibration level for properties more than 200 feet away from the right of way.

The I-405, SR 520 to I-5 Improvement Project will be a design-build project. As such, the location of some project elements will not be known until a design-build contractor is selected. Due to the design-build process, it will not be possible to conduct a full archaeological survey prior to completion of the environmental review process. We will immediately begin working with the State Office of Archaeology and Historic Preservation, the Federal Highway Administration, the Federal Transit Administration, and Tribal governments to develop a programmatic agreement for all of the upcoming I-405 corridor design-build projects that will create a process for phasing cultural resource investigations.

Please respond to this letter with a letter or e-mail acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts for both cultural resources and natural resources. We request your response and comments by **January 31, 2007**. Should you have any questions about this project, you may contact me at 425.456.8610 or rayalli@wsdot.wa.gov

If you have any questions about the Section 106 process, you may contact Ken Juell, WSDOT-Urban Corridor's Office Cultural Resource Specialist at 206-464-1236 or JuellK@wsdot.wa.gov.

Sincerely,

Allison Ray  
I-405 Environmental Manager

Enclosures

cc: John Rasmussen, w/ enclosures  
Steve Boch, FHWA, w/o enclosures  
Ken Juell, WSDOT UCO, w/o enclosures  
Barbara Bundy, WSDOT UCO, w/o enclosures  
Sandie Turner, WSDOT HQ, w/o enclosures  
Colleen Jollie, WSDOT HQ, w/o enclosure



## Corridor Program

Congestion Relief & Bus Rapid Transit Projects

December 29, 2006

Honorable Bill Sweet, Chair  
Snoqualmie Tribe  
P.O. Box 969  
Snoqualmie, WA 98065

### **Re: I-405, SR 520 to I-5 Improvement Project**

Dear Chairperson Sweet,

The Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) are preparing an Environmental Assessment (EA) to document the environmental consequences and possible mitigation measures for the I-405, SR 520 to I-5 Improvement Project within the existing Interstate 405 (I-405) corridor. This project is located between the cities of Bellevue and Lynnwood, WA. Please see the attached project description.

The project Area of Potential Effect (APE) is shown as the red line on the enclosed aerial photo-based maps. It includes areas where archaeological resources may be encountered and areas where historic structures may be directly or indirectly affected. Potential effects to archaeological sites may occur where ground disturbance will take place. Project activities and structures that will produce ground disturbance include grading, pilings for new bridge structures, retaining walls, noise walls, detention ponds, conveyances, and ecology embankments. This area is confined largely to the existing I-405 right-of-way, but also includes intersections that provide access to I-405 and some properties adjacent to the I-405 right-of-way.

Historic structures may be affected in the area adjacent to I-405 right-of-way, and the intersections where improvements are scheduled. The APE boundary encompasses either one tax lot on each side of the right-of-way and the feeder intersections and connector streets or 200 feet from their margins, whichever is less. This definition was chosen for several reasons:

- Much of the project area vicinity is an extensively developed commercial and industrial zone where proposed improvements will not substantially change viewscapes in this highly urbanized area.
- Many commercial lots along I-405 in this industrialized area are large, with the existing structure located a considerable distance from the roadway. The planned work thus would not have an effect on character of the viewshed, noise

level, or vibration level for properties more than 200 feet away from the right of way.

The I-405, SR 520 to I-5 Improvement Project will be a design-build project. As such, the location of some project elements will not be known until a design-build contractor is selected. Due to the design-build process, it will not be possible to conduct a full archaeological survey prior to completion of the environmental review process. We will immediately begin working with the State Office of Archaeology and Historic Preservation, the Federal Highway Administration, the Federal Transit Administration, and Tribal governments to develop a programmatic agreement for all of the upcoming I-405 corridor design-build projects that will create a process for phasing cultural resource investigations.

Please respond to this letter with a letter or e-mail acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts for both cultural resources and natural resources. We request your response and comments by **January 31, 2007**. Should you have any questions about this project, you may contact me at 425.456.8610 or rayalli@wsdot.wa.gov

If you have any questions about the Section 106 process, you may contact Ken Juell, WSDOT-Urban Corridor's Office Cultural Resource Specialist at 206-464-1236 or JuellK@wsdot.wa.gov.

Sincerely,

Allison Ray  
I-405 Environmental Manager

Enclosures

cc: Andrea Rodgers, Snoqualmie Tribe w/enclosures  
Steve Boch, FHWA, w/o enclosures  
Ken Juell, WSDOT UCO, w/o enclosures  
Barbara Bundy, WSDOT UCO, w/o enclosures  
Sandie Turner, WSDOT HQ, w/o enclosures  
Colleen Jollie, WSDOT HQ, w/o enclosure



## Corridor Program

Congestion Relief & Bus Rapid Transit Projects

December 28, 2006

Honorable John Daniels Jr., Chair  
Muckleshoot Tribe  
39015 172<sup>nd</sup> Ave SE  
Auburn, WA 98092

### **Re: I-405, SR 520 to I-5 Improvement Project**

Dear Chairperson Daniels,

The Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) are preparing an Environmental Assessment (EA) to document the environmental consequences and possible mitigation measures for the I-405, SR 520 to I-5 Improvement Project within the existing Interstate 405 (I-405) corridor. This project is located between the cities of Bellevue and Lynnwood, WA. Please see the attached project description.

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Historic structures may be affected in the area adjacent to I-405 right-of-way, and the intersections where improvements are scheduled. The APE boundary encompasses either one tax lot on each side of the right-of-way and the feeder intersections and connector streets or 200 feet from their margins, whichever is less. This definition was chosen for several reasons:

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level, or vibration level for properties more than 200 feet away from the right of way.

The I-405, SR 520 to I-5 Improvement Project will be a design-build project. As such, the location of some project elements will not be known until a design-build contractor is selected. Due to the design-build process, it will not be possible to conduct a full archaeological survey prior to completion of the environmental review process. We are currently working with the State Historic Preservation Office, the Federal Highway Administration, the Federal Transit Administration, and Tribal governments to develop a programmatic agreement for all the I-405 corridor design-build projects that would create a process for phasing cultural resource investigations.

Please respond to this letter with a letter or e-mail acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts for both cultural resources and natural resources. We request your response and comments by **January 31, 2007**. Should you have any questions about this project, you may contact me at 425.450.8610 or rayalli@wsdot.wa.gov

If you have any questions about the Section 106 process, you may contact Ken Juell, WSDOT-Urban Corridor's Office Cultural Resource Specialist at 206-464-1236 or JuellK@wsdot.wa.gov.

Sincerely,

Allison Ray  
I-405 Environmental Manager

Enclosures

cc: Laura Murphy, Muckleshoot Tribe, w/ enclosures  
Karen Walter, Muckleshoot Tribe, w/enclosures  
Steve Boch, FHWA, w/o enclosures  
Ken Juell, WSDOT UCO, w/o enclosures  
Barbara Bundy, WSDOT UCO, w/o enclosures  
Sandie Turner, WSDOT HQ, w/o enclosures  
Colleen Jollie, WSDOT HQ, w/o enclosure



## Corridor Program

Congestion Relief & Bus Rapid Transit Projects

December 29, 2006

Honorable Lavina Washines, Chair  
Confederated Tribes and Bands of the Yakama Nation  
P.O. Box 151  
Toppenish, WA 98948

### **Re: I-405, SR 520 to I-5 Improvement Project**

Dear Chairperson Washines,

The Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) are preparing an Environmental Assessment (EA) to document the environmental consequences and possible mitigation measures for the I-405, SR 520 to I-5 Improvement Project within the existing Interstate 405 (I-405) corridor. This project is located between the cities of Bellevue and Lynnwood, WA. Please see the attached project description.

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If you have any questions about the Section 106 process, you may contact Ken Juell, WSDOT-Urban Corridor's Office Cultural Resource Specialist at 206-464-1236 or JuellK@wsdot.wa.gov.

Sincerely,

Allison Ray  
I-405 Environmental Manager

Enclosures

cc: Kate Valdez, Confederated Tribes and Bands of the Yakama Nation w/enclosures  
Andrea Spencer, Confederated Tribes and Bands of the Yakama Nation  
w/enclosures  
Steve Boch, FHWA, w/o enclosures  
Ken Juell, WSDOT UCO, w/o enclosures  
Barbara Bundy, WSDOT UCO, w/o enclosures  
Sandie Turner, WSDOT HQ, w/o enclosures  
Colleen Jollie, WSDOT HQ, w/o enclosure



## Corridor Program

Congestion Relief & Bus Rapid Transit Projects

December 29, 2006

Honorable Stanley G. Jones Sr., Chair  
Tulalip Tribe  
6700 Totem Beach Rd.  
Tulalip, WA 98271

### **Re: I-405, SR 520 to I-5 Improvement Project**

Dear Chairperson Jones,

The Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) are preparing an Environmental Assessment (EA) to document the environmental consequences and possible mitigation measures for the I-405, SR 520 to I-5 Improvement Project within the existing Interstate 405 (I-405) corridor. This project is located between the cities of Bellevue and Lynnwood, WA. Please see the attached project description.

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Historic structures may be affected in the area adjacent to I-405 right-of-way, and the intersections where improvements are scheduled. The APE boundary encompasses either one tax lot on each side of the right-of-way and the feeder intersections and connector streets or 200 feet from their margins, whichever is less. This definition was chosen for several reasons:

- Much of the project area vicinity is an extensively developed commercial and industrial zone where proposed improvements will not substantially change viewsapes in this highly urbanized area.
- Many commercial lots along I-405 in this industrialized area are large, with the existing structure located a considerable distance from the roadway. The planned work thus would not have an effect on character of the viewshed, noise

level, or vibration level for properties more than 200 feet away from the right of way.

The I-405, SR 520 to I-5 Improvement Project will be a design-build project. As such, the location of some project elements will not be known until a design-build contractor is selected. Due to the design-build process, it will not be possible to conduct a full archaeological survey prior to completion of the environmental review process. We will immediately begin working with the State Office of Archaeology and Historic Preservation, the Federal Highway Administration, the Federal Transit Administration, and Tribal governments to develop a programmatic agreement for all of the upcoming I-405 corridor design-build projects that will create a process for phasing cultural resource investigations.

Please respond to this letter with a letter or e-mail acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts for both cultural resources and natural resources. We request your response and comments by **January 31, 2007**. Should you have any questions about this project, you may contact me at 425.456.8610 or rayalli@wsdot.wa.gov

If you have any questions about the Section 106 process, you may contact Ken Juell, WSDOT-Urban Corridor's Office Cultural Resource Specialist at 206-464-1236 or JuellK@wsdot.wa.gov.

Sincerely,

Allison Ray  
I-405 Environmental Manager

Enclosures

cc: Hank Gobin, Tulalip Tribe w/enclosures  
Richard Young, Tulalip Tribe w/enclosures  
Steve Boch, FHWA, w/o enclosures  
Ken Juell, WSDOT UCO, w/o enclosures  
Barbara Bundy, WSDOT UCO, w/o enclosures  
Sandie Turner, WSDOT HQ, w/o enclosures  
Colleen Jollie, WSDOT HQ, w/o enclosure



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

Washington Division

Suite 501 Evergreen Plaza  
711 South Capitol Way  
Olympia, Washington 98501-1284  
(360) 753-9480  
(360) 753-9889 (FAX)  
<http://www.fhwa.dot.gov/wadiv>

November 19, 2007

HDA-WA / I-405

Ms. Katry Harris  
Advisory Council on Historic Preservation  
1100 Pennsylvania Ave NW, Suite 809  
Old Post Office Building  
Washington, D.C. 20004

Interstate 405 (I-405), State Route 520 to  
Interstate 5 (I-5) Improvement Project;  
King County, Washington

Dear Ms. Harris:

In compliance with Section 106 of the National Historic Preservation Act and 36 CFR 800.6, we are notifying you that the Washington State Department of Transportation (WSDOT), in cooperation with FHWA, is planning to prepare a Memorandum of Agreement (MOA) for the above-named project.

I-405 traverses the east side of Lake Washington in the greater Seattle metropolitan area. A corridor level environmental impact statement was prepared and a record of decision was issued in October 2002. Since then, WSDOT has been developing individual projects along the corridor and has been preparing separate environmental documents for each project. The I-405, SR 520 to I-5 Improvement Project has been developed for the northern end of the corridor (Exhibit 1)

WSDOT, on behalf of FHWA, has defined the project's Area of Potential Effect (APE) (Exhibits 3 through 10) as areas where archaeological resources may be encountered and areas where historic structures may be directly or indirectly affected. The Washington State Historic Preservation Officer (SHPO) and interested and affected tribes reviewed the APE.

WSDOT retained a consulting firm, Landau, Inc., to identify potential historic properties. The survey included archaeological testing and recordation of historic structures. During archaeological testing, the consulting firm found prehistoric stone tools in an area known as East Norway Hill in Snohomish County, on the east side of I-405 (Exhibit 2).

MOVING THE  
**AMERICAN**  
**ECONOMY**

WSDOT requested that the consultant prepare a plan for further testing to evaluate the National Register eligibility of the site, now known as 45KI757. The testing plan was reviewed by the SHPO and interested and affected tribes.

Testing revealed that 45KI757 is an intact deposit that, as currently known, extends 32 meters north-south by 12 meters east-west. Lithic debitage, flaked cobbles, and fire-altered rock were found in eight of fifty-six systematic shovel tests. Archaeological analysis of the artifacts and site context has indicated that the site may date to the Olcott phase, a Puget Sound manifestation of the early Holocene Pebble Tool tradition. The site is eligible for listing in the National Register under Criterion D, because it has the potential to yield important data on a little-known period of Northwest Coast prehistory, and retains stratigraphic integrity.

WSDOT, on behalf of FHWA, has determined that the I-405, SR 520 to I-5 Improvement Project will have an adverse effect on 45KI757. The site will be mostly, if not entirely, destroyed by the construction of a large retaining wall. WSDOT asked project engineers to assess whether impacts could be avoided, but they determined that the retaining wall is a necessary feature of the project and cannot be moved to avoid adverse effects to the site.

FHWA and WSDOT are currently in consultation with SHPO and interested and affected tribes to develop appropriate mitigation measures. FHWA will file a copy of the MOA with your office when it is completed and signed.

If you have any questions or would like additional information on the subject project, please contact me by e-mail at [steve.boch@fhwa.dot.gov](mailto:steve.boch@fhwa.dot.gov) or by phone at 206-220-7536.

Sincerely,

DANIEL M. MATHIS, P.E.  
Division Administrator



By: Stephen P. Boch PE  
Major Project Oversight Manager

Enclosures

cc: William Jordan, I-405, Environmental Manager  
Sharon Love, FHWA, Washington Division  
Allyson Brooks, Washington State Department of Archaeology and Historic Preservation



RECEIVED

NOV 21 2007

URBAN CORRIDORS OFFICE

## SNOQUALMIE TRIBE

8130 Railroad Ave. Ste. 103

PO Box 969

Snoqualmie, WA 98065

Phone: 425-888-6551

Fax: 425-888-6727

E-Mail: [Snoqualmie1855@snoqualmienation.com](mailto:Snoqualmie1855@snoqualmienation.com)

November 19, 2007

William H. Jordan  
I-405 Environmental Program Manager  
600 – 108<sup>th</sup> Ave., NE, Suite 405  
Bellevue, WA 98004

Re: I-405, SR 520 to I-5 Improvement Project; East Norway Hill Lithic Scatter (Smithsonian Number 45K100757 NBA-1)

Dear Mr. Jordan,

We recently received a letter from you stating that artifacts were found at the East Norway Hill Site during a cultural resources survey for the I-405, SR 520-I5 Improvement Project. Based upon the discovery, we strongly support your conclusion that the East Norway Hill Site is eligible for listing on the National Register of Historic Places, and would like to work with you to make that listing happen. The Sammamish River Valley is within the traditional homeland of the Snoqualmie Tribe and therefore, it is highly likely that the site was used as a campsite by descendants of the modern-day Snoqualmie Tribe. The Tribe desires to take whatever measures available to ensure that the site is adequately protected.

You state that the site “is located where a new distributor ramp from northbound I-405 to eastbound SR 522 will be built” and that “project engineers have determined that the site cannot be avoided by construction.” However, we would like to meet with you before we agree that adverse effects to this site cannot be avoided. At this time, it is our hope that the site could be preserved given its importance to the Tribe, and the unique insight it provides into the Tribal way of life during this time. In addition, it is important to ensure that a Tribal Monitor be present during any future ground disturbing activities at the site. Please contact Andrea Rodgers of my staff to set up a meeting so that we can discuss this issue in further detail. She can be reached at (425) 888-6551 ext. 112.

Sincerely,

Matthew Mattson  
Tribal Administrator

Cc: Andrea Rodgers, Karen Suyama, Ian Kanair  
Jennifer Horwitz, Environmental Support Services Manager (same address as above)



**Memorandum of Agreement  
Under Section 106 of the National Historic Preservation Act of 1966, as Amended**

**Among**

**The Federal Highway Administration,  
The Washington State Department of Transportation,  
The Washington State Historic Preservation Officer,  
The Muckleshoot Indian Tribe, and  
The Snoqualmie Indian Tribe**

**For Mitigation of Adverse Effects to Archaeological Site 45KI757,  
Associated with the I-405, SR 520 to I-5 Improvement Project,  
King County, Washington**

WHEREAS, The U.S. Department of Transportation, Federal Highway Administration (FHWA) administers the Federal-Aid Highway Program funds authorized by 23 CFR 101 et seq. and

WHEREAS, the FHWA as the federal agency, and the Washington State Department of Transportation (WSDOT) as the proponent, propose to construct the I-405, SR 520 to I-5 Improvement Project (hereafter, “the project”), and

WHEREAS, FHWA has determined the project is a federal undertaking that must comply with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470) (NHPA), and its implementing regulations, 36 CFR 800; and

WHEREAS, FHWA has determined that the project will have an adverse effect on the pre-contact archaeological site 45KI757, which FHWA determined, and the State Historic Preservation Officer (SHPO) concurred, is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion d; and

WHEREAS, the FHWA has delegated to WSDOT some aspects of Section 106 compliance, and pursuant to 36 CFR 800.13 has authorized the WSDOT to initiate consultation with the SHPO, the interested and affected Indian Tribes, and identified interested parties, but retains legal responsibility for all findings and determinations; and

WHEREAS, FHWA contacted the Advisory Council on Historic Preservation (ACHP) to request their participation in this Agreement, and the ACHP declined; and

WHEREAS, pursuant to 36 CFR 800.6(c)(2), the following Indian Tribes have been consulted and invited to participate in the development of this Agreement: Muckleshoot Tribe, Snoqualmie Tribe, Tulalip Tribes, and the Yakama Nation; and;

WHEREAS, the Muckleshoot Tribe and the Snoqualmie Tribe have agreed to consider participating in the development of this Agreement as concurring parties, and the Tulalip Tribes of Washington and Yakama Nation have chosen not to participate; and

WHEREAS, pursuant to 36 CFR 800.6(c)(2), the Duwamish Tribal Organization was consulted and invited to participate in the development of this agreement as an identified interested party, and has chosen not to participate; and

WHEREAS, WSDOT has established the undertaking's Area of Potential Effects (APE), as defined in 36 CFR 15 800.16(d), has consulted about this APE with interested and affected Indian Tribes and SHPO; and

WHEREAS, WSDOT has consulted with SHPO, the Muckleshoot Tribe and the Snoqualmie Tribe in accordance with the NHPA and 36 CFR Part 800.6(b)(1) to mitigate the adverse effect on the historic property 45KI757; and

WHEREAS, WSDOT intends to use the provisions of this Agreement to address applicable requirements of Sections 110(b) of NHPA;

NOW, THEREFORE, FHWA, WSDOT, SHPO, the Muckleshoot Tribe and the Snoqualmie Tribe agree that FHWA shall ensure that the following stipulations are met in order to take into account the effects of the project on historic properties.

**Stipulations:**

1. Archaeological Data Recovery

- a. The Archaeological Data Recovery Plan (Appendix 1), addressing the data collection and reporting related to the subject historic property 45KI757 and the public and professional dissemination of information, shall be executed.
- b. WSDOT shall ensure that additional and thorough subsurface investigation of the topographic bench immediately north of the known artifact distribution is completed during the data recovery excavations. This work is mentioned in the Archaeological Data Recovery Plan on page 5, paragraph 4, but WSDOT shall ensure that its archaeological contractor completes this investigation to honor a specific request by the Snoqualmie Tribe.

2. Tribal Monitoring

- a. The Snoqualmie Tribe shall have a tribal monitor on-site during data recovery excavations. WSDOT shall enter into written, contractual agreement with the Snoqualmie Tribe to provide state-only funds for tribal monitor participation.
- b. The Muckleshoot Indian Tribe may choose to have a tribal monitor on-site during data recovery operations, but both WSDOT and the Muckleshoot Tribe agree that such participation would be funded solely by the Muckleshoot Tribe.

### 3. Collection

- a. The cultural artifacts, other cultural materials, and records (hereafter, “collection”) resulting from discovery, testing, data recovery, and construction monitoring at archaeological site 45KI757 are the property of the citizens of the State of Washington. FHWA and WSDOT shall ensure that the collection is housed at a curation facility that meets all federal standards and requirements as provided in 36CFR79.
- b. The collection shall be housed for renewable 3-year terms at a Tribal curation facility, first with the Muckleshoot Tribe and then with the Snoqualmie Tribe. Anytime after the Snoqualmie Tribe has a curation facility in operation that is certified to meet standards and requirements of 36CFR79 by the Bureau of Indian Affairs, the Snoqualmie Tribe may request WSDOT to transfer the collection to the Snoqualmie Tribe’s facility upon expiration of the current 3-year term. The curation length of residence at the Snoqualmie Tribe’s facility then shall be for an equivalent number of 3-year terms. Specific details of each curation agreement shall be negotiated between WSDOT and the particular Tribe that will house the collection. One or more Cultural Resources program staff from each party shall lead agreement negotiations and implement the collection transfers.
- c. WSDOT, the Muckleshoot Tribe, and the Snoqualmie Tribe, in accordance with applicable state and federal laws, shall coauthor and sign a curation agreement for permanent storage of the collection at one or more Tribal curation facilities. All parties shall begin negotiating the agreement within 30 calendar days of the collection being transferred from the Muckleshoot Tribe’s to the Snoqualmie Tribe’s curation facility. One or more Cultural Resources program staff from each party shall lead agreement negotiations. If an agreement between the three parties cannot be reached by the end of the final 3-year term described in 3.b., WSDOT shall assume possession and seek permanent curation of the collection in another facility that meets the standards of 36CFR79.

### 4. Unanticipated Discovery

- a. The Unanticipated Discovery Plan (UDP, Appendix 2) shall be used during construction. The UDP outlines procedures to be followed during construction in the event that additional cultural artifacts and/or materials, or any human remains, are discovered.

### 5. Other Terms and Conditions

- a. If the archaeological data recovery at site 45KI757 has not been completed by January 1, 2010, this Agreement shall be terminated and FHWA shall notify all signatory and concurring parties. If FHWA chooses to continue with the undertaking, it shall reinstate review of the project in accordance with 36CFR800.
- b. Modification, amendment, or termination of this Agreement, as necessary, shall be accomplished by the signatories in the same manner as the original agreement.

- c. Disputes regarding the completion of the terms of this Agreement shall be resolved by the signatories. If the signatories cannot agree regarding a dispute, any one of the signatories may request the participation of ACHP to assist in resolving the dispute.

**SIGNED:**

FEDERAL HIGHWAY ADMINISTRATION  
Daniel M. Mathis, P.E., Division Administrator

By: Daniel M. Mathis Date: 08-26-08

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
Craig J. Stone, Urban Corridors Office Administrator

By: Craig J. Stone Date: 8-26-08

WASHINGTON STATE HISTORIC PRESERVATION OFFICER  
Dr. Allyson Brooks

By: Allyson Brooks Date: 8/27/08

**CONCUR:**

MUCKLESHOOT INDIAN TRIBE  
Honorable Charlotte Williams, Chairwoman

By: Charlotte Williams Date: 7-28-08

SNOQUALMIE TRIBE  
Honorable Joseph Mullen, Chairman

By: Joseph Mullen Date: 8-14-08



600 -- 108th Avenue NE, Suite 405  
Bellevue, WA 98004  
Main 425-456-8500  
Fax 425-456-8600

August 20, 2008

Honorable Cecile Hansen, Chair  
Duwamish Tribe  
4717 West Marginal Way SW  
Seattle, WA 98106

**Re: I-405, SR 520 to I-5 Improvement Project  
Cultural Resource Technical Memorandum**

Dear Chairperson Hansen:

Per provisions of 36CFR800, we are continuing consultation for the I-405, SR 520 to I-5 Improvement Project. Enclosed please find a copy of the *I-405, SR 520 to I-5 Improvement Project Cultural Resources Technical Memorandum* prepared by Washington State Department of Transportation (WSDOT) Cultural Resources Program staff and Landau Associates, Inc. The technical memorandum reports the results of archaeological subsurface investigations and an inventory of built historic-era buildings in the Area of Potential Effects (APE).

Based on findings presented in the technical memorandum, and tribal and interested party consultation, we have determined that there are two historic properties in the APE eligible for listing in the National Register of Historic Places (NRHP): archaeological site 45KI757 and the Hosmer/Fries residence. Two other archaeological sites, 45KI756 and field site number NBH-013, and twelve other historic structures are not NRHP-eligible.

The project will have an Adverse Effect on archaeological site 45KI757, but will have No Adverse Effect on the Hosmer/Fries residence. As you may recall, we have been working with the Snoqualmie Tribe, the Muckleshoot Indian Tribe, the Department of Archaeology and Historic Preservation, and the Federal Highway Administration over the past year to develop a Memorandum of Agreement (MOA) describing mitigation of the adverse effect to site 45KI757. Although the Duwamish Tribe declined to participate in the development of this MOA, we will transmit a copy of the finalized MOA to you.

If you have any comments on the attached document, or if you have knowledge of any potentially significant cultural resources in or near the proposed project area that may have been overlooked, please submit them to us by September 22, 2008. If you have any questions regarding the project, please contact me at 425.456.8647 or

William.jordan@i405.wsdot.wa.gov. Alternatively, you may reach Ken Juell, UCO's Cultural Resources Specialist at 206.464.1236 or JuellK@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'William H. Jordan', written over a faint, illegible typed name.

William H. Jordan  
I-405 Corridor Environmental Manager

Enclosures

cc (via email):

Barbara Bundy, WSDOT  
Ken Juell, WSDOT  
Scott Williams, WSDOT  
Matt Sterner, DAHP  
Steve Boch, FHWA



600 – 108th Avenue NE, Suite 405  
Bellevue, WA 98004  
Main 425-456-8500  
Fax 425-456-8600

August 20, 2008

Honorable Melvin Sheldon, Chair  
Tulalip Tribe  
6700 Totem Beach Rd.  
Tulalip, WA 98271

**Re: I-405, SR 520 to I-5 Improvement Project  
Cultural Resource Technical Memorandum**

Dear Chairperson Sheldon:

Per provisions of 36CFR800, we are continuing consultation for the I-405, SR 520 to I-5 Improvement Project. Enclosed please find a copy of the *I-405, SR 520 to I-5 Improvement Project Cultural Resources Technical Memorandum* prepared by Washington State Department of Transportation (WSDOT) Cultural Resources Program staff and Landau Associates, Inc. The technical memorandum reports the results of archaeological subsurface investigations and an inventory of built historic-era buildings in the Area of Potential Effects (APE).

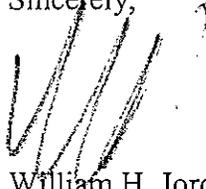
Based on findings presented in the technical memorandum, and tribal and interested party consultation, we have determined that there are two historic properties in the APE eligible for listing in the National Register of Historic Places (NRHP): archaeological site 45KI757 and the Hosmer/Fries residence. Two other archaeological sites, 45KI756 and field site number NBH-013, and twelve other historic structures are not NRHP-eligible.

The project will have an Adverse Effect on archaeological site 45KI757, but will have No Adverse Effect on the Hosmer/Fries residence. As you may recall, we have been working with the Snoqualmie Tribe, the Muckleshoot Indian Tribe, the Department of Archaeology and Historic Preservation, and the Federal Highway Administration over the past year to develop a Memorandum of Agreement (MOA) describing mitigation of the adverse effect to site 45KI757. Although the Tulalip Tribe declined to participate in the development of this MOA, we will transmit a copy of the finalized MOA to you.

If you have any comments on the attached document, or if you have knowledge of any potentially significant cultural resources in or near the proposed project area that may have been overlooked, please submit them to us by September 22, 2008. If you have any questions regarding the project, please contact me at 425.456.8647 or

William.jordan@i405.wsdot.wa.gov. Alternatively, you may reach Ken Juell, UCO's Cultural Resources Specialist at 206.464.1236 or JuellK@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. H. Jordan', written over a faint, illegible typed name.

William H. Jordan  
I-405 Corridor Environmental Manager

Enclosures

cc (via email):

Barbara Bundy, WSDOT  
Ken Juell, WSDOT  
Scott Williams, WSDOT  
Matt Sterner, DAHP  
Steve Boch, FHWA



600 – 108th Avenue NE, Suite 405  
Bellevue, WA 98004  
Main 425-456-8500  
Fax 425-456-8600

August 20, 2008

Kate Valdez  
Cultural Resource Manager  
Yakama Nation  
PO Box 151  
Toppenish, WA 98948

**Re: I-405, SR 520 to I-5 Improvement Project  
Cultural Resource Technical Memorandum**

Dear Ms. Valdez:

Per provisions of 36CFR800, we are continuing consultation for the I-405, SR 520 to I-5 Improvement Project. Enclosed please find a copy of the *I-405, SR 520 to I-5 Improvement Project Cultural Resources Technical Memorandum* prepared by Washington State Department of Transportation (WSDOT) Cultural Resources Program staff and Landau Associates, Inc. The technical memorandum reports the results of archaeological subsurface investigations and an inventory of built historic-era buildings in the Area of Potential Effects (APE).

Based on findings presented in the technical memorandum, and tribal and interested party consultation, we have determined that there are two historic properties in the APE eligible for listing in the National Register of Historic Places (NRHP): archaeological site 45KI757 and the Hosmer/Fries residence. Two other archaeological sites, 45KI756 and field site number NBH-013, and twelve other historic structures are not NRHP-eligible.

The project will have an Adverse Effect on archaeological site 45KI757, but will have No Adverse Effect on the Hosmer/Fries residence. As you may recall, we have been working with the Snoqualmie Tribe, the Muckleshoot Indian Tribe, the Department of Archaeology and Historic Preservation, and the Federal Highway Administration over the past year to develop a Memorandum of Agreement (MOA) describing mitigation of the adverse effect to site 45KI757. Although the Yakama Nation declined to participate in the development of this MOA, we will transmit a copy of the finalized MOA to you.

If you have any comments on the attached document, or if you have knowledge of any potentially significant cultural resources in or near the proposed project area that may have been overlooked, please submit them to us by September 22, 2008. If you have any questions regarding the project, please contact me at 425.456.8647 or

William.jordan@i405.wsdot.wa.gov. Alternatively, you may reach Ken Juell, UCO's Cultural Resources Specialist at 206.464.1236 or JuellK@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'William H. Jordan', written over a faint, illegible typed name.

William H. Jordan  
I-405 Corridor Environmental Manager

Enclosures

cc (via email):

Barbara Bundy, WSDOT  
Ken Juell, WSDOT  
Scott Williams, WSDOT  
Matt Sterner, DAHP  
Steve Boch, FHWA



600 – 108th Avenue NE, Suite 405  
Bellevue, WA 98004  
Main 425-456-8500  
Fax 425-456-8600

August 20, 2008

Laura Murphy, Cultural Resources  
Muckleshoot Indian Tribe  
39015 172<sup>nd</sup> Avenue SE  
Auburn, WA 98092

**Re: I-405, SR 520 to I-5 Improvement Project  
Cultural Resource Technical Memorandum**

Dear Ms. Murphy:

Per provisions of 36CFR800, we are continuing consultation for the I-405, SR 520 to I-5 Improvement Project. Enclosed please find a copy of the *I-405, SR 520 to I-5 Improvement Project Cultural Resources Technical Memorandum* prepared by Washington State Department of Transportation (WSDOT) Cultural Resources Program staff and Landau Associates, Inc. The technical memorandum reports the results of archaeological subsurface investigations and an inventory of built historic-era buildings in the Area of Potential Effects (APE).

Based on findings presented in the technical memorandum, and tribal and interested party consultation, we have determined that there are two historic properties in the APE eligible for listing in the National Register of Historic Places (NRHP): archaeological site 45KI757 and the Hosmer/Fries residence. Two other archaeological sites, 45KI756 and field site number NBH-013, and twelve other historic structures are not NRHP-eligible.

The project will have an Adverse Effect on archaeological site 45KI757, but will have No Adverse Effect on the Hosmer/Fries residence. As you know, we have been working with the Snoqualmie Tribe, the Muckleshoot Indian Tribe, the Department of Archaeology and Historic Preservation, and the Federal Highway Administration over the past year to develop a Memorandum of Agreement (MOA) describing mitigation of the adverse effect to site 45KI757. We will be sending you a copy of the finalized MOA shortly.

Typically, WSDOT would have sent this technical memorandum to the Muckleshoot Indian Tribe for review prior to, or at the time we started working with you on the MOA. Due to project scheduling, this transmittal was delayed. If you have any comments on the attached document, or if you have knowledge of any potentially significant cultural

resources in or near the proposed project area that may have been overlooked, please submit them to us by September 22, 2008.

If you have any questions regarding the project, please contact me at 425.456.8647 or William.jordan@i405.wsdot.wa.gov. Alternatively, you may reach Ken Juell, UCO's Cultural Resources Specialist at 206.464.1236 or JuellK@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. Jordan', with a long horizontal stroke extending to the right.

William H. Jordan  
I-405 Corridor Environmental Manager

Enclosures

cc (via email):

Barbara Bundy, WSDOT  
Ken Juell, WSDOT  
Scott Williams, WSDOT  
Matt Sterner, DAHP  
Peter Jilek, FHWA



600 – 108th Avenue NE, Suite 405  
Bellevue, WA 98004  
Main 425-456-8500  
Fax 425-456-8600

August 20, 2008

Andrea Rodgers  
Snoqualmie Tribe  
P.O. Box 969  
Snoqualmie, WA 98065

**Re: I-405, SR 520 to I-5 Improvement Project  
Cultural Resource Technical Memorandum**

Dear Ms. Rodgers:

Per provisions of 36CFR800, we are continuing consultation for the I-405, SR 520 to I-5 Improvement Project. Enclosed please find a copy of the *I-405, SR 520 to I-5 Improvement Project Cultural Resources Technical Memorandum* prepared by Washington State Department of Transportation (WSDOT) Cultural Resources Program staff and Landau Associates, Inc. The technical memorandum reports the results of archaeological subsurface investigations and an inventory of built historic-era buildings in the Area of Potential Effects (APE).

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resources in or near the proposed project area that may have been overlooked, please submit them to us by September 22, 2008.

If you have any questions regarding the project, please contact me at 425.456.8647 or William.jordan@i405.wsdot.wa.gov. Alternatively, you may reach Ken Juell, UCO's Cultural Resources Specialist at 206.464.1236 or JuellK@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. Jordan', with a long horizontal stroke extending to the right.

William H. Jordan  
I-405 Corridor Environmental Manager

Enclosures

cc (via email):

Barbara Bundy, WSDOT  
Ken Juell, WSDOT  
Scott Williams, WSDOT  
Matt Sterner, DAHP  
Peter Jilek, FHWA

September 24, 2008

Allyson Brooks, PhD  
Washington State Preservation Officer  
Department of Archaeology and Historic Preservation  
PO Box 48343  
Olympia, WA 98504-8343

**Re: I-405, SR 520 to I-5 Improvement Project**

**Log No: 010407-02-FHWA**

Dear Dr. Brooks:

Per provisions of 36CFR800, we are continuing consultation for the I-405, SR 520 to I-5 Improvement Project. Enclosed please find a copy of the *I-405, SR 520 to I-5 Improvement Project Cultural Resources Technical Memorandum* prepared by Washington State Department of Transportation (WSDOT) Cultural Resources Program staff and Landau Associates, Inc. The technical memorandum reports the results of both archaeological subsurface investigations and an inventory of built historic-era buildings in the Area of Potential Effects (APE).

Based on findings presented in the technical memorandum, and tribal and interested party consultation, we have determined that there are two historic properties in the APE: archaeological site 45KI757 and the Hosmer/Fries residence are eligible for listing in the National Register of Historic Places (NRHP). Two other archaeological sites, 45KI756 and field site number NBH-013, and twelve other historic structures are determined not eligible for placement in the NRHP.

We have determined that the project cannot avoid archaeological site 45KI757 by redesign of either studied alternative, thus resulting in a determination of Adverse Effect on Historic Properties. While the project will have an adverse effect on archaeological site 45KI757, it will have no adverse effect on the Hosmer/Fries residence. We look forward to your concurrence with our determinations of eligibility and project effects.

Project design elements related to stormwater discharge outfall under the Sammamish River Bridge have not advanced sufficiently to establish the nature or extent of ground disturbance, and design will be completed by the design-build contractor after the environmental review is complete and the FONSI is signed. Therefore, the Section 106 assessment and determination of potential effects in that project area will be made under the process outlined in the I-405 Corridor Programmatic Agreement.

As part of our government-to-government consultation, we have provided the cultural resources technical memorandum to the identified concerned tribes to illicit their review and comments. They include the Muckleshoot Indian Tribe, the Snoqualmie Tribe, the Tulalip Tribes, and the Yakama Nation. The non-federally recognized Duwamish Tribal Community also is being consulted for comments as an identified interested party. Copies of transmittal letters have been sent by the project office to your office under separate cover. We will provide you with copies of any reply or commentary we receive from the consulting parties.

As you are aware, we have already begun working with your office, interested and affected tribes, and FHWA on a Memorandum of Agreement describing mitigation of the adverse effect to site 45KI757.

Should you have questions, comments or concerns, please contact me at 206-464-1236 or [juellk@wsdot.wa.gov](mailto:juellk@wsdot.wa.gov) or I-405 Corridor Environmental Manager Bill Jordan at 425-456-8647 or [William.jordan@i405.wsdot.wa.gov](mailto:William.jordan@i405.wsdot.wa.gov).

Sincerely,

A handwritten signature in black ink that reads "Kenneth E. Juell". The signature is written in a cursive, flowing style.

Kenneth E. Juell  
Cultural Resources Specialist

Enclosures

Cc: Bill Jordan, WSDOT  
Allison Hanson, WSDOT  
Scott Williams, WSDOT  
Steve Boch, FHWA



Washington State  
Department of Transportation

Northwest Washington Division  
Urban Corridors Office  
401 Second Avenue South, Suite 400  
Seattle, WA 98104  
206-716-1143/Fax 206-716-1101  
www.wsdot.wa.gov

February 23, 2009

Allyson Brooks, PhD  
Washington State Preservation Officer  
Department of Archaeology and Historic Preservation  
PO Box 48343  
Olympia, WA 98504-8343

**Re: I-405, SR 520 to I-5 Improvement Project**

**Log No: 010407-02-FHWA**

Dear Dr. Brooks:

Per provisions of 36CFR800, we are continuing consultation for the I-405, SR 520 to I-5 Improvement Project. Enclosed please find a copy of the *I-405, SR 520 to I-5 Improvement Project Cultural Resources Technical Memorandum* prepared by Washington State Department of Transportation (WSDOT) Cultural Resources Program staff and Landau Associates, Inc. The technical memorandum reports the results of both archaeological subsurface investigations and an inventory of built historic-era buildings in the Area of Potential Effects (APE).

Based on findings presented in the technical memorandum, and tribal and interested party consultation, we have determined that there are two historic properties in the APE: archaeological site 45KI757 and the Hosmer/Fries residence are eligible for listing in the National Register of Historic Places (NRHP). Two other archaeological sites, 45KI756 and field site number NBH-013, and twelve other historic structures are determined not eligible for placement in the NRHP.

We have determined that the project cannot avoid archaeological site 45KI757 by redesign of either studied alternative, thus resulting in a determination of Adverse Effect on Historic Properties. While the project will have an adverse effect on archaeological site 45KI757, it will have no adverse effect on the Hosmer/Fries residence. We look forward to your concurrence with our determinations of eligibility and project effects.

Project design elements related to stormwater discharge outfall under the Sammamish River Bridge have not advanced sufficiently to establish the nature or extent of ground disturbance, and design will be completed by the design-build contractor after the environmental review is complete and the FONSI is signed. Therefore, the Section 106 assessment and determination of potential effects in that project area will be made under the process outlined in the I-405 Corridor Programmatic Agreement.

As part of our government-to-government consultation, we have provided the cultural resources technical memorandum to the identified concerned tribes to illicit their review and comments. They include the Muckleshoot Indian Tribe, the Snoqualmie Tribe, the Tulalip Tribes, and the Yakama Nation. The non-federally recognized Duwamish Tribal Community also is being consulted for comments as an identified interested party. Copies of transmittal letters have been sent by the project office to your office under separate cover. We will provide you with copies of any reply or commentary we receive from the consulting parties.

As you are aware, we have already begun working with your office, interested and affected tribes, and FHWA on a Memorandum of Agreement describing mitigation of the adverse effect to site 45KI757.

Should you have questions, comments or concerns, please contact me at 206-464-1236 or [juellk@wsdot.wa.gov](mailto:juellk@wsdot.wa.gov) or I-405 Corridor Environmental Manager Bill Jordan at 425-456-8647 or [William.jordan@i405.wsdot.wa.gov](mailto:William.jordan@i405.wsdot.wa.gov).

Sincerely,



Kenneth E. Juell  
Cultural Resources Specialist

Enclosures

Cc: Bill Jordan, WSDOT  
Allison Hanson, WSDOT  
Scott Williams, WSDOT  
Pete Jilek, FHWA



STATE OF WASHINGTON

**DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION**

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501  
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343  
(360) 586-3065 • Fax Number (360) 586-3067 • Website: [www.dahp.wa.gov](http://www.dahp.wa.gov)

March 9, 2009

Mr. Ken Juell  
Washington State Department of Transportation  
Urban Corridors Office  
401 Second Avenue South, Suite 560  
Seattle, Washington 98104-3850

In future correspondence please refer to:  
Log: 010407-02-FHWA  
Property: I-405, SR 520 to I-5 Improvement Project  
Re: ADVERSE Effect

Dear Mr. Juell:

Thank you for contacting the Department of Archaeology and Historic Preservation (DAHP). We have reviewed the report entitled, *I-405, SR 520 to I-5 Improvement Project: Cultural, Historic, and Archaeological Technical Memorandum*, completed February 2008. The review was conducted on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800.

We concur with the identification of thirteen historical-period structures within the area of potential effect (APE). You have recommended that twelve of the structures are not eligible for listing in the National Register of Historic Places (NRHP). We concur with this determination. You have recommended that one of the structures, the Hosmer/Fries Residence (20115 112<sup>th</sup> Ave), is eligible for listing in the NRHP. We do not concur with this determination and contend that this structure does not meet eligibility criteria that would warrant listing in the NRHP. We feel that the structure is **not eligible** for listing in the NRHP.

Of the three archaeological resources identified during the cultural resources survey, we concur that 45KI756 and NBH-013 are not eligible for listing in the NRHP. We will also concur with your interpretation that 45KI757 does meet eligibility criteria for listing in the NRHP. Since the project cannot avoid impacting this resource, we concur with your determination that this constitutes an **adverse effect** to the resource.

Since a memorandum of agreement has already been drafted and signed by the signatory agencies, we look forward to the successful execution of that document and the subsequent archaeological report that will be generated following the conclusion of the fieldwork.



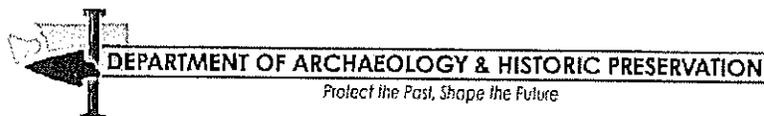
We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,



Matthew Sterner, M.A., RPA  
Transportation Archaeologist  
(360) 586-3082  
matthew.sterner@dahp.wa.gov





600 – 108<sup>th</sup> Avenue, NE, Suite 405  
Bellevue, WA 98004  
Main 425-456-8500  
Fax 425-456-8600

January 22, 2010

Pete Jilek  
NW Region Urban Area Engineer (King Co.)  
Federal Highway Administration  
711 S Capitol Way, Suite 501  
Olympia, WA 98501

**Re: I-405, SR 520 to I-5 Improvement Project  
Archaeological Data Recovery at Site 45KI757  
Draft Report and Request for Review and Comments**

Dear Mr. Jilek:

Per provisions of 36CFR800.6(c) and as stipulated in the Memorandum of Agreement among the Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT), the State Historic Preservation Officer (SHPO), the Muckleshoot Indian Tribe, and the Snoqualmie Tribe, WSDOT is continuing consultation related to the above-referenced project.

Enclosed please find the data recovery report for archaeological site 45KI757, completed by AMEC Earth & Environmental Inc (AMEC). This report has gone through internal WSDOT review and technical editing to produce a draft of the final report. The purpose of this letter is to ask you to complete a review of this report, and provide comments in order to produce the final report. We respectfully ask that your comments be returned to us on or before February 26, 2010. On March 1, we will collate all comments received and provide them to AMEC for them to produce the final data recovery report.

Based on discovery probing in November, 2006 and subsequent subsurface excavations in June and July, 2007 to evaluate the historical significance, the resource was interpreted as a small, short-term camp occupied during the early Holocene Olcott Phase (>7,000 years ago). It was determined Eligible for listing on the National Register of Historic Places based on its purported age and a relatively small lithic assemblage that suggested an opportunity to investigate a single- or several-use Olcott camp. Olcott sites typically are palimpsests - or a very large number of partially overlapping occupations – where information about group size, duration and season of use at any one camp is obscured by the multiple overlapping occupations.

Following the data recovery excavations in October, 2009 and a thorough laboratory analysis of all lithic items collected, including from the discovery and significance-testing phases, the artifact assemblage is now only a single artifact or isolate – a broken, Olcott-type spear point. The remaining items lack diagnostic flake attributes and instead are interpreted as weathered,



## Corridor Program

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Bellevue, WA 98004  
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platy rock types fractured by water transport and pressure imposed by the glacial ice sheet that once covered the site area and vicinity.

WSDOT, on behalf of FHWA, now intends to change the historical significance assessment, determine site 45KI757 Not Eligible for listing on the National Register of Historic Places, and request SHPO concurrence with that determination. Thus we also request your comments about eligibility of this resource. We will request the change in eligibility status when we submit the final report to DAHP in mid-March, following receipt of your comments and their incorporation into the AMEC final report.

Please let me know if you have comments, questions or concerns during your review. You may contact me at any time at [juellk@wsdot.wa.gov](mailto:juellk@wsdot.wa.gov) or at my new telephone number (206) 770-3522, or I-405 Environmental Program Manager Bill Jordan at [william.jordan@i405.wsdot.wa.gov](mailto:william.jordan@i405.wsdot.wa.gov) or (425) 456-8647. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Kenneth E. Juell".

Kenneth E. Juell  
Archaeologist  
SR 520 Bridge Replacement and HOV Program  
Washington State Department of Transportation  
600 Stewart Street, Suite 520, 4-21  
Seattle, WA 98101

Cc via email: Bill Jordan, WSDOT w/o enclosure  
Scott Williams, WSDOT, w/ enclosure  
Megan Cotton, WSDOT w/o enclosure  
Matthew Sterner, DAHP w/o enclosure



600 – 108<sup>th</sup> Avenue, NE, Suite 405  
Bellevue, WA 98004  
Main 425-456-8500  
Fax 425-456-8600

January 22, 2010

Dr. Allyson Brooks  
State Historic Preservation Officer  
Department of Archaeology and Historic Preservation  
PO Box 48343  
Olympia, WA 98504-8343

**Re: I-405, SR 520 to I-5 Improvement Project, Archaeological Data Recovery at Site 45KI757: Draft Report and Request for Review and Comments**

Dear Dr Brooks:

Per provisions of 36CFR800.6(c) and as stipulated in the Memorandum of Agreement among the Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT), the State Historic Preservation Officer (SHPO), the Muckleshoot Indian Tribe, and the Snoqualmie Tribe, WSDOT is continuing consultation related to the above-referenced project.

Enclosed please find the data recovery report for archaeological site 45KI757, completed by AMEC Earth & Environmental Inc (AMEC). This report has gone through internal WSDOT review and technical editing to produce a draft of the final report. The purpose of this letter is to ask you to complete a review of this report, and provide comments in order to produce the final report. We respectfully ask that your comments be returned to us on or before February 26, 2010. On March 1, we will collate all comments received and provide them to AMEC for them to produce the final data recovery report.

Based on discovery probing in November, 2006 and subsequent subsurface excavations in June and July, 2007 to evaluate the historical significance, the resource was interpreted as a small, short-term camp occupied during the early Holocene Olcott Phase (>7,000 years ago). It was determined Eligible for listing on the National Register of Historic Places based on its purported age and a relatively small lithic assemblage that suggested an opportunity to investigate a single- or several-use Olcott camp. Olcott sites typically are palimpsests - or a very large number of partially overlapping occupations – where information about group size, duration and season of use at any one camp is obscured by the multiple overlapping occupations.

Following the data recovery excavations in October, 2009 and a thorough laboratory analysis of all lithic items collected, including from the discovery and significance-testing phases, the artifact assemblage is now only a single artifact or isolate – a broken, Olcott-type spear point. The remaining items lack diagnostic flake attributes and instead are interpreted as weathered, platy rock types fractured by water transport and pressure imposed by the glacial ice sheet that once covered the site area and vicinity.



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WSDOT, on behalf of FHWA, now intends to change the historical significance assessment, determine site 45KI757 Not Eligible for listing on the National Register of Historic Places, and request SHPO concurrence with that determination. Thus we also request your comments about eligibility of this resource. We will request the change in eligibility status when we submit the final report to DAHP in mid-March, following receipt of your comments and their incorporation into the AMEC final report.

Please let me know if you have comments, questions or concerns during your review. You may contact me at any time at [juellk@wsdot.wa.gov](mailto:juellk@wsdot.wa.gov) or at my new telephone number (206) 770-3522, or I-405 Environmental Program Manager Bill Jordan at [william.jordan@i405.wsdot.wa.gov](mailto:william.jordan@i405.wsdot.wa.gov) or (425) 456-8647. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Kenneth E. Juell".

Kenneth E. Juell  
Archaeologist  
SR 520 Bridge Replacement and HOV Program  
Washington State Department of Transportation  
600 Stewart Street, Suite 520, 4-21  
Seattle, WA 98101

Cc: Pete Jilek, FHWA w/ enclosure  
Bill Jordan, WSDOT w/o enclosure  
Scott Williams, WSDOT, w/ enclosure  
Megan Cotton, WSDOT w/o enclosure  
Matthew Sterner, DAHP w/o enclosure



600 – 108<sup>th</sup> Avenue, NE, Suite 405  
Bellevue, WA 98004  
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Fax 425-456-8600

January 22, 2010

Laura Murphy  
Archaeologist  
Muckleshoot Indian Tribe  
39015 172<sup>nd</sup> Avenue SE  
Auburn, WA 98092

**Re: I-405, SR 520 to I-5 Improvement Project,  
Archaeological Data Recovery at Site 45KI757  
Draft Report and Request for Review and Comments**

Dear Ms Murphy:

Per provisions of 36CFR800.6(c) and as stipulated in the Memorandum of Agreement among the Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT), the State Historic Preservation Officer (SHPO), the Muckleshoot Indian Tribe, and the Snoqualmie Tribe, WSDOT is continuing consultation related to the above-referenced project.

Enclosed please find the data recovery report for archaeological site 45KI757, completed by AMEC Earth & Environmental Inc (AMEC). This report has gone through internal WSDOT review and technical editing to produce a draft of the final report. The purpose of this letter is to ask you to complete a review of this report, and provide comments in order to produce the final report. We respectfully ask that your comments be returned to us on or before February 26, 2010. On March 1, we will collate all comments received and provide them to AMEC for them to produce the final data recovery report.

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platy rock types fractured by water transport and pressure imposed by the glacial ice sheet that once covered the site area and vicinity.

WSDOT, on behalf of FHWA, now intends to change the historical significance assessment, determine site 45KI757 Not Eligible for listing on the National Register of Historic Places, and request SHPO concurrence with that determination. Thus we also request your comments about eligibility of this resource. We will request the change in eligibility status when we submit the final report to DAHP in mid-March, following receipt of your comments and their incorporation into the AMEC final report.

Please let me know if you have comments, questions or concerns during your review. You may contact me at any time at [juellk@wsdot.wa.gov](mailto:juellk@wsdot.wa.gov) or at my new telephone number (206) 770-3522, or I-405 Environmental Program Manager Bill Jordan at [william.jordan@i405.wsdot.wa.gov](mailto:william.jordan@i405.wsdot.wa.gov) or (425) 456-8647. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Kenneth E. Juell".

Kenneth E. Juell  
Archaeologist  
SR 520 Bridge Replacement and HOV Program  
Washington State Department of Transportation  
600 Stewart Street, Suite 520, 4-21  
Seattle, WA 98101

Cc: Pete Jilek, FHWA w/ enclosure  
Bill Jordan, WSDOT w/o enclosure  
Scott Williams, WSDOT, w/ enclosure  
Megan Cotton, WSDOT w/o enclosure  
Matthew Sterner, DAHP w/o enclosure



600 – 108<sup>th</sup> Avenue, NE, Suite 405  
Bellevue, WA 98004  
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Fax 425-456-8600

January 22, 2010

Ray Mullen  
Cultural Resources Manager  
Snoqualmie Tribe  
PO Box 969  
Snoqualmie, WA 98014

**Re: I-405, SR 520 to I-5 Improvement Project  
Archaeological Data Recovery at Site 45KI757  
Draft Report and Request for Review and Comments**

Dear Mr Mullen:

Per provisions of 36CFR800.6(c) and as stipulated in the Memorandum of Agreement among the Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT), the State Historic Preservation Officer (SHPO), the Muckleshoot Indian Tribe, and the Snoqualmie Tribe, WSDOT is continuing consultation related to the above-referenced project.

Enclosed please find the data recovery report for archaeological site 45KI757, completed by AMEC Earth & Environmental Inc (AMEC). This report has gone through internal WSDOT review and technical editing to produce a draft of the final report. The purpose of this letter is to ask you to complete a review of this report, and provide comments in order to produce the final report. We respectfully ask that your comments be returned to us on or before February 26, 2010. On March 1, we will collate all comments received and provide them to AMEC for them to produce the final data recovery report.

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## Corridor Program

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WSDOT, on behalf of FHWA, now intends to change the historical significance assessment, determine site 45KI757 Not Eligible for listing on the National Register of Historic Places, and request SHPO concurrence with that determination. Thus we also request your comments about eligibility of this resource. We will request the change in eligibility status when we submit the final report to DAHP in mid-March, following receipt of your comments and their incorporation into the AMEC final report.

Please let me know if you have comments, questions or concerns during your review. You may contact me at any time at [juellk@wsdot.wa.gov](mailto:juellk@wsdot.wa.gov) or at my new telephone number (206) 770-3522, or I-405 Environmental Program Manager Bill Jordan at [william.jordan@i405.wsdot.wa.gov](mailto:william.jordan@i405.wsdot.wa.gov) or (425) 456-8647. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Kenneth E. Juell".

Kenneth E. Juell  
Archaeologist  
SR 520 Bridge Replacement and HOV Program  
Washington State Department of Transportation  
600 Stewart Street, Suite 520, 4-21  
Seattle, WA 98101

Cc: Pete Jilek, FHWA w/ enclosure  
Bill Jordan, WSDOT w/o enclosure  
Scott Williams, WSDOT, w/ enclosure  
Megan Cotton, WSDOT w/o enclosure  
Matthew Sterner, DAHP w/o enclosure



STATE OF WASHINGTON

**DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION**

*1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501*  
*Mailing address: PO Box 48343 • Olympia, Washington 98504-8343*  
*(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov*

February 17, 2010

Mr. Ken Juell  
Cultural Resources Specialist  
WSDOT ESO Mega Projects  
401 Second Ave. South, Suite 300  
Seattle, Washington 98104-3850

In future correspondence please refer to:

Log: 010407-02-FHWA  
Property: I-405, SR 520 to I-5 Improvement Project  
Re: Archaeology - No Historic Properties, 45KI757 not Eligible

Dear Mr. Juell:

Thank you for contacting our office and providing a copy of the cultural resources data recovery report for work at 45KI757, completed by AMEC. We concur with their professional recommendations and your reconsideration of the National Register of Historic Places (NRHP) eligibility of 45KI757 as not eligible for listing. I have no other comments on the report at this time.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and this office and the concerned tribes notified.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Matthew Sterner, M.A.  
Transportation Archaeologist  
(360) 586-3082  
matthew.sterner@dahp.wa.gov





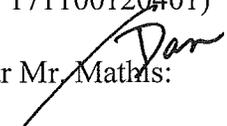
**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, WA 98115

Reply To:  
NMFS Tracking Number:  
2007/09070

December 11, 2008

Daniel M. Mathis  
Division Administrator  
Federal Highway Administration  
Evergreen Plaza Building  
711 S. Capitol Way, Suite 501  
Olympia, Washington 98501

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Interstate 405, State Route 520 to Interstate 5 Improvement Project, King County, Washington. (Sixth Field HUCs, Lower Sammamish River 171100120301, and Middle Sammamish River 171100120401)

  
Dear Mr. Mathis:

The enclosed document contains a biological opinion prepared by the National Marine Fisheries Service pursuant to Section 7(a)(2) of the Endangered Species Act on the effects of the Federal Highway Administration's funding of the Interstate 405, State Route 520 to I 5 Improvement Project, in King County, Washington. In this biological opinion, the National Marine Fisheries Service concludes that the action, as proposed, is not likely to jeopardize the continued existence of Puget Sound Chinook salmon, Puget Sound steelhead, or result in the destruction or adverse modification of designated critical habitat for Puget Sound Chinook salmon.

As required by Section 7 of the Endangered Species Act, the Services provided an incidental take statement with the biological opinion. The incidental take statement describes reasonable and prudent measures the National Marine Fisheries Service considers necessary or appropriate to minimize incidental take associated with this action. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements, that the Federal agency and any person who performs the action must comply with to carry out the reasonable and prudent measures. Incidental take from actions that meet these terms and conditions will be exempt from the Endangered Species Act take prohibition.

This document also includes the results of our analysis of the action's likely effects on essential fish habitat pursuant to Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and includes three conservation recommendations to avoid, minimize, or otherwise offset potential adverse effects on essential fish habitat.



These Conservation Recommendations are a non-identical set of the Endangered Species Act Terms and Conditions.

Section 305(b) (4) (B) of the MSA requires Federal agencies to provide a detailed written response to the National Marine Fisheries Service within 30 days after receiving these recommendations.

If the response is inconsistent with the essential fish habitat conservation recommendations, the Federal Highway Administration must explain why the recommendations will not be followed, including the justification for any disagreements over the effects of the action and the recommendations. In response to increased oversight of overall essential fish habitat program effectiveness by the Office of Management and Budget, the National Marine Fisheries Service established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each essential fish habitat consultation and how many are adopted by the action agency. Therefore, in your statutory reply to the essential fish habitat portion of this consultation, we ask that you clearly identify the number of conservation recommendations accepted.

If you have any questions, please contact Sean Callahan of my staff at the Washington State Habitat Office at (206) 716-1145, by e-mail at [sean.callahan@noaa.gov](mailto:sean.callahan@noaa.gov), or by mail at the letterhead address.

Sincerely,



*for* D. Robert Lohn  
Regional Administrator

cc: Peter Jilek, FHWA  
Michelle Steinmetz, WSDOT, UCO  
Phillip Bloch, WSDOT, UCO  
Paul Wagner, HQ, WSDOT



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Western Washington Fish and Wildlife Office  
510 Desmond Dr. SE, Suite 102  
Lacey, Washington 98503

**RECEIVED**

**JAN 05 2009**

**DEC 31 2008**

**UCO - I-405 CORRIDOR**

In Reply Refer To:  
13410-2007-F-0641

Mr. Daniel M. Mathis  
Division Administrator  
Federal Highway Administration - Washington Division  
711 South Capitol Way, Suite 501 Evergreen Plaza  
Olympia, Washington 98501-1284

ATTN: Pete Jilek

Dear Mr. Mathis:

This document transmits the U.S. Fish and Wildlife Service's Biological Opinion (BO) based on our review of the proposed Interstate 405, State Route 520 to Interstate 5 Improvement Project in King and Snohomish Counties, Washington, and its effects on the bull trout (*Salvelinus confluentus*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

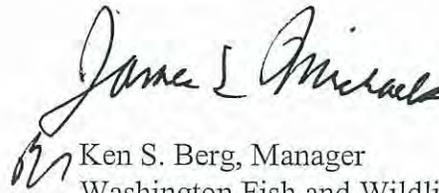
The Washington State Department of Transportation (WSDOT) initially requested informal consultation via written correspondence, dated September 6, 2007, and received in our office on September 7, 2007. Pending the results of a "stormwater audit" (i.e., information compiled for previous consultations addressing these same portions of Interstate 405), the WSDOT placed this consultation on-hold from December 11, 2007, to July 18, 2008. The Service's consulting biologist met with environmental staff from the WSDOT's Urban Corridors Office on July 18, 2008, and agreed that the information provided to date was sufficient to initiate formal consultation.



The Federal Highway Administration and WSDOT have provided information in support of a “may affect, likely to adversely affect” determination for the bull trout. We concur with this effect determination. The enclosed BO addresses the proposed action’s adverse effects on bull trout and includes mandatory terms and conditions intended to minimize certain adverse effects.

If you have any questions regarding the BO or your responsibilities under the Endangered Species Act, please contact Ryan McReynolds at (360) 753-6047 or John Grettenberger at (360) 753-6044, of my staff.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken S. Berg". The signature is written in a cursive style with a large initial "K".

Ken S. Berg, Manager  
Washington Fish and Wildlife Office

cc:

WSDOT, Urban Corridors Office (M. Steinmetz)

WSDOT, I-405 Corridor Program (B. Jordan)

WSDOT, Environmental Services Office (P. Wagner)

Endangered Species Act - Section 7 Consultation

**BIOLOGICAL OPINION**

USFWS Log# 13410-2007-F-0641

Interstate-405, State Route 520 to  
Interstate-5 Improvement Project

King and Snohomish Counties, Washington

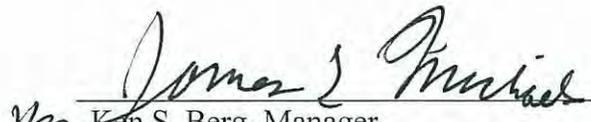
Agency:

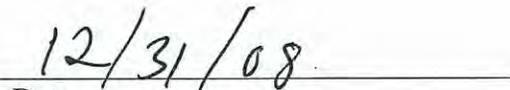
Federal Highway Administration  
Olympia, Washington

Consultation Conducted By:

U.S. Fish and Wildlife Service  
Western Washington Fish and Wildlife Office  
Lacey, Washington

December 2008

  
Ken S. Berg, Manager  
Washington Fish and Wildlife Office

  
Date



August 19, 2010

TO: Pete Jilek, FHWA

FROM: William H. Jordan, WSDOT

SUBJECT: Bellevue to Lynnwood ESA Determination

**Bellevue to Lynnwood  
(previously referred to as the I-405, SR 520 to I-5 Improvement Project)**

**Endangered Species Act Background**

On January 11, 2008, NOAA-Fisheries issued its Biological Opinion for the 520 to I-5 project, concluding that the project was “not likely to jeopardize the continued existence of Puget Sound Chinook salmon, Puget Sound steelhead, or result in the destruction or adverse modification of designated critical habitat for Puget Sound Chinook salmon.” Similarly, on December 31, 2009, USFWS concurred with FHWA and WSDOT’s “may affect, likely to adversely affect” determination for the project. On that date, USFWS also issued a Biological Opinion which concluded that the project is “not likely to jeopardize the continued existence of the bull trout in its coterminous range.

Since that time, the project limits have changed slightly, some work is being deleted as it was covered by a separate environmental document, and additional widening has been proposed both northbound and southbound between NE 85<sup>th</sup> and NE 124<sup>th</sup> street.

**New Project Limits**

The project limits have moved south approximately 1.12 miles from SR 520 to NE 6<sup>th</sup>. The project limits are proposed to move south this distance to accommodate striping changes necessary for transitioning into an express toll lane system. Project activities in this section of roadway are limited to restriping and no ground disturbing elements, with the possible exception of sign posts, would be added.

**Deleted Project Elements**

The 195<sup>th</sup> to SR 527 Improvement Project, which added a northbound auxiliary lane between 195<sup>th</sup> and SR 527, was initially part of the Bellevue to Lynnwood Project. Approximately 2 years ago, the project team reassessed this section of roadway improvements and determined that the auxiliary lane had independent utility, logical termini and did not restrict consideration of alternatives for other reasonably foreseeable transportation improvements. FHWA determined that the project was appropriately

Pete Jilek  
August 19, 2010  
Page 2

analyzed as a documented categorical exclusion on March 26, 2009. Construction started on this project in October 2009 and was completed during the summer of 2010. The project was designed and built with stormwater improvements consistent with the ESA consultation with NOAA-Fisheries and USFWS.

**New Project Elements**

The new proposed auxiliary lanes will be in the northbound and southbound directions between NE 85<sup>th</sup> Street and NE 124<sup>th</sup> Street (mp 18.0 to 19.9). The project will also incorporate 9 WSP enforcement areas. Each will require approximately 4 feet of additional widening for a length of 1300 feet. The new lanes and the enforcement areas will not involve any work in sensitive aquatic resources and will include full stormwater retrofit and meet all performance criteria as identified in the ESA consultation documentation (Biological Assessment, both agencies' Biological Opinions).

It is the I-405 project team's opinion that the minor and discountable effects associated with these project changes would not result in a change to the initial affect determination and would not trigger a re-initiation of ESA consultation with either NOAA-Fisheries or UWFWS. We are seeking your concurrence with this opinion.

cc: Alicia Toney, WSDOT  
Jennifer Horwitz, WSDOT  
Wendy Taylor, WSDOT

## Jennifer Horwitz

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**From:** Toney, Alicia [ToneyA@wsdot.wa.gov]  
**Sent:** Monday, August 30, 2010 11:14 AM  
**To:** William Jordan; Jennifer Horwitz; Wendy Taylor  
**Subject:** FW: Bellevue to Lynwood ESA

No re-initiation of ESA consultation needed.  
Alicia

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**From:** [Pete.Jilek@dot.gov](mailto:Pete.Jilek@dot.gov) [<mailto:Pete.Jilek@dot.gov>]  
**Sent:** Monday, August 30, 2010 11:09 AM  
**To:** Toney, Alicia  
**Subject:** RE: Bellevue to Lynwood ESA

Alicia,

FHWA concurs that ESA consultation does not need to be re-initiated.

Pete

*Pete Jilek, P.E.*

Federal Highway Administration  
Urban Area Engineer  
Phone: 360-753-9550  
Fax: 360-753-9889

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**From:** Toney, Alicia [<mailto:ToneyA@wsdot.wa.gov>]  
**Sent:** Monday, August 30, 2010 9:07 AM  
**To:** Jilek, Pete (FHWA)  
**Cc:** William Jordan; Jennifer Horwitz  
**Subject:** FW: Bellevue to Lynwood ESA

Pete,  
Here's the memo I just spoke to you about. Please let me know if you concur that ESA consultation does not need to be re-initiated due to the very minimal changes in the project.

Thanks,  
Alicia

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**From:** Toney, Alicia  
**Sent:** Thursday, August 19, 2010 4:10 PM  
**To:** Jilek, Pete (FHWA)  
**Cc:** 'William.Jordan-consultant@I405.wsdot.wa.gov'; 'Jennifer Horwitz'; 'Wendy Taylor'  
**Subject:** Bellevue to Lynwood ESA

Hi Pete,  
Per our conversation, please find the attached memo regarding ESA consultation for the Bellevue to Lynwood Improvement Project.

Thank you,  
Alicia Toney  
I-405 Project Team  
(D)425.456.8584

## **DISCIPLINE REPORTS AND TECHNICAL MEMORANDA**

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The following appendices are available on CD-ROM or by downloading from the project website (<http://www.wsdot.wa.gov/projects/i405/ne6thtoi5>):

Appendix E – Air Quality Technical Memorandum

Appendix F – Cultural, Historic, and Archaeological Technical Memorandum

Appendix G – Cumulative Effects Analysis Technical Memorandum

Appendix H – Economics Technical Memorandum

Appendix I – Ecosystems Discipline Report

Appendix J – Hazardous Materials Technical Memorandum

Appendix K – Land Use Patterns, Plans and Policies Discipline Report

Appendix L – Noise Discipline Report

Appendix M – Section 4(f) Technical Memorandum

Appendix N – Social, Public Services, and Environmental Justice Discipline Report

Appendix O – Soils and Geology Technical Memorandum

Appendix P – Transportation Discipline Report

Appendix Q – Utilities Technical Memorandum

Appendix R – Visual Quality Technical Memorandum

Appendix S – Water Resources Discipline Report

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